

EXHIBIT C3

(Part 1 of 2)

52 F.3d 967

52 F.3d 967, 63 USLW 2663, 34 U.S.P.Q.2d 1321

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Briefs and Other Related Documents

United States Court of Appeals, Federal
Circuit.

**Herbert MARKMAN and Positek, Inc.,
Plaintiffs-Appellants,
v.
WESTVIEW INSTRUMENTS, INC. and
Althon Enterprises, Inc., Defendants-
Appellees.**

No. 92-1049.

April 5, 1995.

Holder of patent for inventory control method for use in dry cleaning business brought patent infringement action against competitor. The United States District Court for the Eastern District of Pennsylvania, Marvin Katz, J., ruled that patent was not infringed, and patentee appealed. The Court of Appeals, Archer, Chief Judge, held that: (1) construction of patent claims, which define scope of patentee's rights under patent, is matter of law exclusively for court; (2) patent specification and prosecution history established that term "inventory" in patent meant "articles of clothing," rather than cash or inventory receipts; and (3) requiring court, rather than jury, to construe and determine scope of patent claims did not violate Seventh Amendment right to jury trial.

Affirmed.

Mayer, Circuit Judge, filed opinion concurring in judgment.

Rader, Circuit Judge, filed opinion concurring in judgment.

Pauline Newman, Circuit Judge, filed dissenting opinion.

West Headnotes

[1] Patents ⇨ 314(5)

291k314(5) Most Cited Cases

Construction of patent claims, which define scope of patentee's rights under patent, is matter of law exclusively for court.

[2] Federal Courts ⇨ 776

170Bk776 Most Cited Cases

On appeal, Court of Appeals reviews de novo correctness of district court's grant of judgment as matter of law (JMOL) by applying JMOL standard. Fed.Rules Civ.Proc.Rule 50, 28 U.S.C.A.

[3] Federal Courts ⇨ 765

170Bk765 Most Cited Cases

Factual findings made by jury in arriving at its verdict are to be upheld on appeal unless party moving for judgment as matter of law (JMOL) shows that, when correct legal standard is applied, there is not substantial evidence to support finding in favor of nonmovant. Fed.Rules Civ.Proc.Rule 50, 28 U.S.C.A.

[4] Federal Civil Procedure ⇨ 2610

170Ak2610 Most Cited Cases

[4] Federal Courts ⇨ 776

170Bk776 Most Cited Cases

While jury's factual findings receive substantial deference on motion for judgment as matter of law (JMOL), legal standards that jury applies, expressly or implicitly, in reaching its verdict are considered by district court and appellate court de novo to determine whether those standards are correct as matter of law. Fed.Rules Civ.Proc.Rule 50, 28 U.S.C.A.

[5] Federal Courts ⇨ 765

170Bk765 Most Cited Cases

Notwithstanding jury's verdict, on review of motion for judgment as matter of law (JMOL), court retains power and duty to see what correct law is, and then to examine factual issues submitted to jury and determined whether findings thereon are supported by

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substantial evidence and support verdict under the law. Fed.Rules Civ.Proc.Rule 50, 28 U.S.C.A.

[6] Federal Civil Procedure ⇨ 2178
170Ak2178 Most Cited Cases

Generally, when reviewing law on properly laid and renewed motion for judgment as matter of law (JMOL), appellate court is not bound by instructions given jury, even if they were not objected to. Fed.Rules Civ.Proc.Rule 50, 28 U.S.C.A.

[7] Patents ⇨ 324.5
291k324.5 Most Cited Cases
(Formerly 170Ak2178)

Court of Appeals was not required to defer to jury's construction of patent claims on grounds district court instructed jury to interpret claims and alleged infringer did not object to that instruction.

[8] Patents ⇨ 226.6
291k226.6 Most Cited Cases

Patent infringement analysis entails two steps: first step is determining meaning and scope of patent claims asserted to be infringed; second step is comparing properly construed claims to device accused of infringing.

[9] Patents ⇨ 101(2)
291k101(2) Most Cited Cases

[9] Patents ⇨ 165(3)
291k165(3) Most Cited Cases

Terms "claim interpretation" and "claim construction" mean one and the same thing in patent law.

[10] Patents ⇨ 314(5)
291k314(5) Most Cited Cases

In case tried to jury, court has power and obligation to construe as matter of law meaning of language used in patent claims.

[11] Patents ⇨ 101(4)
291k101(4) Most Cited Cases

Patent claims must be read in view of specification, of which they are a part.

[12] Patents ⇨ 101(2)
291k101(2) Most Cited Cases

[12] Patents ⇨ 101(4)
291k101(4) Most Cited Cases

Patentee is free to be his or her own lexicographer; however, any special definition given to word must be clearly defined in patent specification.

[13] Patents ⇨ 168(2.1)
291k168(2.1) Most Cited Cases

To construe claim language, court should consider patent's prosecution history, if it is in evidence.

[14] Patents ⇨ 101(2)
291k101(2) Most Cited Cases

[14] Patents ⇨ 157(1)
291k157(1) Most Cited Cases

Court has broad power to look as matter of law to prosecution history of patent in order to ascertain true meaning of language used in patent claims.

[15] Patents ⇨ 168(2.1)
291k168(2.1) Most Cited Cases

Although prosecution history can and should be used to understand language used in patent claims, it cannot enlarge, diminish of vary limitations in claims.

[16] Patents ⇨ 159
291k159 Most Cited Cases

"Extrinsic evidence" consists of all evidence external to patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises; this evidence may be helpful to explain scientific principles, meaning of technical terms, and terms of art that appear in patent and prosecution history.

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[17] Patents ⇌ 159

291k159 Most Cited Cases

Court may, in its discretion, receive extrinsic evidence in order to aid court in coming to correct conclusion as to true meaning of language employed in patent.

[18] Patents ⇌ 159

291k159 Most Cited Cases

Extrinsic evidence is to be used for court's understanding of patent, not for purpose of varying or contradicting terms of the claims.

[19] Patents ⇌ 314(5)

291k314(5) Most Cited Cases

When, after considering extrinsic evidence, court finally arrives at understanding of language as used in patent and prosecution history, court must then pronounce as matter of law meaning of that language; this ordinarily can be accomplished by court in framing its charge to jury, but may also be done in context of dispositive motions such as those seeking judgment as matter of law.

[20] Patents ⇌ 312(2)

291k312(2) Most Cited Cases

Trial court did not abuse its discretion in patent infringement case when it admitted extrinsic evidence offered by patentee, including patentee's testimony and testimony of patentee's expert, on issue of claim construction.

[21] Patents ⇌ 159

291k159 Most Cited Cases

(Formerly 291k312(2))

Trial court properly rejected extrinsic evidence on claim construction in patent infringement case to extent it contradicted court's construction of patent claims based on specification and prosecution history.

[22] Patents ⇌ 167(1)

291k167(1) Most Cited Cases

[22] Patents ⇌ 168(2.1)**291k168(2.1) Most Cited Cases**

Patent specification and prosecution history established that term "inventory" in patent for inventory-control system for use in dry cleaning business meant "articles of clothing," rather than cash or inventory receipts; claim language indicating that system was designed to detect and localize spurious additions to and deletions from inventory would not have made sense if applied to cash receipts, and patentee's explanation of claims to patent examiner indicated that patent was designed to track articles of clothing.

[23] Patents ⇌ 312(3.1)

291k312(3.1) Most Cited Cases

Testimony of patentee and his patent attorney on proper construction of patent claims was not entitled to deference.

[24] Patents ⇌ 159

291k159 Most Cited Cases

Extrinsic evidence of record cannot be relied on to change meaning of patent claims.

[25] Jury ⇌ 14(1.1)

230k14(1.1) Most Cited Cases

Requiring court, rather than jury, to construe and determine scope of patent claims did not violate Seventh Amendment right to jury trial. U.S.C.A. Const.Amend. 7.

[26] Patents ⇌ 157(1)

291k157(1) Most Cited Cases

Construing patent claims was not analogous to construing and interpreting contracts, deeds, or wills.

[27] Jury ⇌ 14(1.1)

230k14(1.1) Most Cited Cases

Statutory interpretation model is more accurate model than contractual one for purposes of determining whether constitutional protections are violated by assigning patent claim construction exclusively to judges. U.S.C.A. Const.Amend.

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7.

***970** William B. Mallin, Eckert, Seamans, Cherin & Mellott, Pittsburgh, PA, argued for plaintiffs-appellants. With him on the brief were Lewis F. Gould, Jr., Timothy P. Ryan and Brian M. Martin.

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Before ARCHER, Chief Judge, [FN*] and RICH, NIES, NEWMAN, MAYER, MICHEL, PLAGER, LOURIE, CLEVINGER, RADER, and SCHALL, Circuit Judges. [FN**]

FN* Chief Judge Archer assumed the position of Chief Judge on March 18, 1994.

FN** Circuit Judge Bryson joined the Federal Circuit on October 7, 1994 and has not participated in the disposition of this appeal.

Opinion for the Court filed by Chief Judge ARCHER, in which Circuit Judges RICH, NIES, MICHEL, PLAGER, LOURIE, CLEVINGER, and SCHALL join. Concurring opinions filed by Circuit Judges MAYER, and RADER. Dissenting opinion filed by Circuit Judge NEWMAN.

ARCHER, Chief Judge.

[1] Herbert Markman and Positek, Inc. (collectively referred to as Markman) appeal from the judgment of the United States District Court for the Eastern District of Pennsylvania, Civil Action No. 91-0940 (entered Oct. 1, 1991), that Westview Instruments, Inc. and Althon Enterprises, Inc. (collectively referred to as Westview) did not infringe claims 1 or 10 of United States Reissue Patent No. 33,054, notwithstanding the jury's verdict to the contrary. We have ordered that this case be reheard in banc. [FN1] We affirm the judgment of noninfringement. In doing so, we conclude that the interpretation and construction of patent claims, which define the scope of the patentee's rights under the patent, is a matter of law exclusively for ***971** the court. Thus, in this case the district court properly discharged its obligation to delineate the scope of the claim on motion for judgment as a matter of law when the jury had rendered a verdict that was incompatible with a proper claim construction.

(Cite as: 52 F.3d 967, *971)

FN1. A panel of this court heard oral argument in the appeal. On November 5, 1993, this court ordered *sua sponte* that the appeal be reheard in banc. The court also requested additional briefing and has been helped by the supplemental briefs of the parties and by the several briefs *amicus curiae*.

I.

A. In the dry-cleaning industry, articles of clothing typically are taken in from customers, recorded in some form, and then sorted according to criteria such as type of clothing and type of cleaning required. During the sorting process, articles of clothing belonging to one customer may be combined together, and also may be combined with similar clothing belonging to other customers, in order to make the cleaning process more efficient and less costly. After the articles of clothing are sorted, they may be cleaned in the same establishment or transported to another establishment for cleaning. During the cleaning process, the articles of clothing move through different locations in the establishment. After cleaning, of course, the articles of clothing must be unsorted and returned to the respective customers.

Markman is the inventor named in and the owner of United States Reissue Patent No. 33,054 (the '054 patent), titled "Inventory Control and Reporting System for Drycleaning Stores." Markman's original patent No. 4,550,246 was reissued and the reissue is the patent in suit. Positek is a licensee under the patent in the dry-cleaning business.

The '054 patent is directed to an inventory-control system that assertedly solves inventory-related problems prevalent in the dry-cleaning business. As the '054 patent specification discusses, articles of clothing can be lost in the sorting and cleaning process, and it has been found in the dry-cleaning business that even a small percentage-loss of articles of clothing will generate great consumer dissatisfaction. Also, attendant personnel might send clothing through the cleaning process but pocket the proceeds of the transactions and destroy or fail to do the appropriate paperwork, thereby servicing the

customers adequately but stealing from the business. In such circumstances it is difficult for the business owner to locate the loss of profits and to deter such activities.

The invention of the '054 patent is described in detail in the specification which states that the inventory control system is "capable of monitoring and reporting upon the status, location and throughput of inventory in an establishment," and that by using the invention of the '054 patent, "the progress of articles through the laundry and drycleaning system can be completely monitored." In this way, the business owner can "reconcile[] [the inventory] at any point in the sequence" of sorting, cleaning, and unsorting clothing, and can "detect and localize spurious additions to inventory as well as spurious deletions therefrom."

According to the specification's description of the invention, as customers bring in their articles of clothing for cleaning, the articles are accumulated by an attendant. The attendant enters information on a keyboard identifying at least the particular customer, the type of articles being deposited, and the particular cleaning operations to be performed. Other information may be entered depending upon the complexity of the system.

A data processor stores and processes the data entered by the attendant, associating sequential customers and transactions with a unique indicium such as a number. The processor is connected to a printer that generates a written record of the stored information associated with the particular customers and transactions. No transaction can proceed without generating a written record, thereby ensuring that each transaction is accounted for.

The patent specification specifies that the written record is to have different portions. For example, the written record includes a customer ticket or receipt, a management ticket copy, and a plurality of article tags. The article tags are to be attached to individual articles or groups of articles in inventory.

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The management ticket and the article tags contain a bar code and a unique indicium such as a number associated with a customer, transaction, and other information. The bar code records are custom printed sequentially, as sequential customer transactions occur. *972 The tags thus not only associate a bar code with transactions, but also with an article or group of articles, persons, physical items in inventory, and other information again depending upon the system's complexity.

Optical detector devices are then used to read the bar code indicia, and they may be located at various points in the cleaning process, including at least at the customer service station. The articles are logged through a particular station by scanning the tags containing the bar codes with the detector. The bar codes are used to call up information associated with the customer or transaction, and used to generate reports containing information such as the location of articles within the system, the number of articles located at a particular point in the system, etc. Obviously, the more optical detectors, the tighter the inventory control. After the articles have been processed, optical detection of the bar codes can be used to reorganize the articles into customer packages. The overall result is that additions to and deletions from inventory can be located--wherever an optical detector appears--and can be associated with particular customers and articles of clothing. In this way the inventory can be fully reconciled.

In claim 1, the only independent claim involved in this appeal, Markman claims his invention to be (emphasis added):

1. The inventory control and reporting system, comprising:
a data input device for manual operation by an attendant, the input device having switch means operable to encode information relating to sequential transactions, each of the transactions having articles associated therewith, said information including transaction identity and *descriptions of each of said articles* associated with the transactions;
a data processor including memory operable to record said information and *means to*

maintain an inventory total, said data processor having means to associate sequential transactions with unique sequential indicia and *to generate at least one report of said total* and said transactions, the unique sequential indicia and the descriptions of articles in the sequential transactions being reconcilable against one another;
a dot matrix printer operable under control of the data processor to generate a written record of the indicia associated with sequential transactions, the written record including optically-detectable bar codes having a series of contrasting spaced bands, the bar codes being printed only in coincidence with each said transaction and at least part of the written record bearing a *portion to be attached to said articles*; and,
at least one optical scanner connected to the data processor and operable to detect said bar codes *on all articles* passing a predetermined station,
whereby said system can detect and *localize spurious additions to inventory* as well as spurious deletions therefrom.

In dependent claim 10, Markman specifies that in the invention of claim 1, the input device is an alpha-numeric keyboard wherein single keys may be used to enter attributes of items being entered.

B. Markman sued Westview and Althon for infringement of claims 1, 10, and 14 of the '054 patent. Westview makes and sells specialty electronic devices, including the system accused of being an infringement of the '054 patent. Althon owns and operates two dry-cleaning sites and uses Westview's device in one of its shops.

The accused Westview device consists of two separate pieces of equipment, which Westview calls the DATAMARK and the DATASCAN. The DATAMARK is a stationary unit comprising a keyboard, electronic display, processor, and printer. When a customer brings articles of clothing in for cleaning, an attendant enters on a keypad information about the customer, articles to be cleaned, and charges for the cleaning. The DATAMARK then prints a bar-coded ticket or invoice listing

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the information about the customer, the clothes to be cleaned, and the charges for the cleaning. The DATAMARK retains permanently in memory only the invoice number, date, and cash total. The DATAMARK is thus used to print bar-coded *973 tickets for the articles and to retain an invoice list.

The DATASCAN is a portable unit comprising a microprocessor and an optical detector for reading bar-coded tickets or invoices at any location in the dry-cleaning establishment. To use the DATASCAN, first the invoice list is transferred from the DATAMARK to the DATASCAN. Then, the DATASCAN is carried about to read the bar-codes on tickets or invoices in the establishment. As it does this, it can report any discrepancy between the particular invoice read (or not read) and the invoice list. In this way the DATASCAN identifies extra or missing *invoices*.

C. At a jury trial on the issue of infringement, Markman presented the testimony of four witnesses: (1) an expert on bar-code technology who testified about the manner in which Westview's device operates, (2) Markman, the inventor, who testified about his patent and its claims, (3) a "patent expert"-that is, a practicing patent lawyer-who testified in his capacity as a patent lawyer about the meaning of the claim language and how the claims allegedly read on the accused system, (4) an accountant who testified as to the number of allegedly infringing systems sold. Also included in evidence were the actual Westview device and its operating manuals, brochures, and computer program. At the conclusion of Markman's case in chief, Westview moved for a directed verdict. [FN2] The district court deferred ruling on the motion. Westview then presented the testimony of a single witness, its president, who demonstrated the operation of the Westview device and testified about its capabilities.

FN2. "Directed verdict" has since been renamed "judgment as a matter of law" and is hereinafter referred to as such. See Fed.R.Civ.P. 50.

The district court charged the jury on infringement, instructing it to "determine the meaning of the claims ... using the relevant patent documents including the specifications, the drawings and the file histories." The court continued that "[a]lso relevant are other considerations that show how the terms of a claim would normally be understood by those of ordinary skill in the art." The court then instructed the jury to compare the claims with the Westview device to determine if it infringes. The jury returned answers to general interrogatories finding that Westview infringed independent claim 1 and dependent claim 10 but did not infringe independent claim 14. [FN3]

FN3. The finding of noninfringement of independent claim 14 is not at issue in this appeal.

The district court then heard argument on and granted Westview's deferred motion for judgment as a matter of law (JMOL). Stating that claim construction was a matter of law for the court, the district court provided its construction of the claims. The court held that "inventory" as used in the claims meant "articles of clothing" and not simply transaction totals or dollars. Under the district court's construction, the claims require that the system be able to track articles of clothing through the dry-cleaning process, detect and localize missing and additional articles of clothing, and generate reports about the status and location of the articles of clothing. It is undisputed that Westview's system is incapable of doing this because it does not retain information regarding the particular articles of clothing, but rather only a listing of the invoices and the cash total of the inventory. Among other things, the court concluded that Westview's device does not have the "means to maintain an inventory total" required by claim 1, and cannot "detect and localize spurious additions to inventory as well as spurious deletions therefrom," and directed a verdict of noninfringement of claims 1 and 10.

II.

A. Markman appealed from the district

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court's grant of JMOL of noninfringement of claims 1 and 10. In this court, Markman's principal argument is that the district court erred in granting the JMOL, stating:

Requiring the jury to interpret certain terms of the patent was quite proper, and indeed required, as the meaning of certain terms of Claim 1 was contested at trial. *See Polumbo v. Don-Joy Co.* [sic.], 762 F.2d 969, 974, 226 USPQ 5, 8 (Fed.Cir.1985) (when the meaning of a claim term is *974 disputed a "factual question arises, and construction of the claim should be left to the trier or jury under appropriate instruction.")

....

Despite entrusting the jury with interpreting the claim, the trial court thwarted [Markman's] right to a jury determination of this factual issue simply because it disagreed with the jury's interpretation. At the root of the district court's astonishing opinion was its mistaken belief that it had a license to re-find the facts and reinterpret the claims as if there were no jury and no jury verdict because, in different appropriate cases, claims of a patent may be interpreted as a matter of law....

... Indeed the deference due to a jury's claim construction was stated positively by this court in *Tol-O-Matic [Inc. v. Proma Produkt-Und Marketing Gesellschaft m.b.H.]*, 945 F.2d 1546, 1550-52, 20 USPQ2d 1332, 1336-38 (Fed.Cir.1991).] ...

....

... While in appropriate circumstances, claims may be interpreted as a matter of law by the court, in this case the jury was asked to and did interpret the patent as part of reaching its finding of infringement. Once the jury was assigned this task and rendered its verdict, the trial court was not permitted to discredit the verdict and substitute its evaluation of the evidence for the jury's.

In particular, Markman argues that the district court erroneously substituted its construction of the disputed claim term "inventory" for the jury's implied construction.

As the above quotation shows, Markman contends that the jury was properly given the question of claim construction and that the

jury's claim construction and verdict thereon is supported by substantial evidence. The evidence Markman points to in support of the jury verdict is not the language of the patent specification or prosecution history, but rather Markman's own testimony as inventor and the testimony of his patent expert. He also relies on use of the word "inventory" in Westview's product literature and on the testimony of its president. Markman's position essentially is that all the evidence of the meaning of the word "inventory," from the patent, prosecution history, experts, and documents, was properly lumped together and submitted to the jury for it to resolve what in fact is the meaning of "inventory," and that the result of this process is entitled to highly deferential review both by the trial court on motion for JMOL and by this court on appeal from the grant or denial of JMOL.

Setting aside the issue of who properly determines the ultimate scope of the claims, Markman further argues that the district court misconstrued the term "inventory" to mean "articles of clothing" in addition to "cash" or "invoice totals" in order to find that claim 1 defines a system that "tracks" articles of clothing through the dry-cleaning process. Markman says that based on all the evidence presented at trial the term "inventory" as used in claim 1 means "articles of clothing" or "dollars" or "cash" or "invoices," and is not necessarily limited to a construction that always includes "articles of clothing."

Westview on the other hand focuses almost exclusively on the patent and prosecution history to inform the meaning of "inventory." It argues that the patent and prosecution history are in conflict with the testimony and other evidence relied on by Markman and therefore Markman's evidence should be disregarded by the court in favor of the meaning revealed by the patent. This task of assigning the meaning to "inventory," and the meaning assigned are, in the view of Westview, all legal matters for the court and subject to *de novo* review.

It is undisputed that when the claim term "inventory" is construed to mean "the

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physical articles of clothing" or to require "articles of clothing" as part of its meaning, the Westview system lacks "means to maintain an inventory total" and does not and cannot "detect and localize spurious additions to inventory as well as spurious deletions therefrom," as claim 1 would thus require. [FN4] *975 Markman's appeal therefore turns on (1) whether the district court acted properly by construing the term "inventory" as a matter of law notwithstanding a contrary construction given the term by some of Markman's witnesses and by the jury, and (2) regardless of whether the court or the jury determines the scope of the claims, whether the term "inventory" requires as part of its meaning "articles of clothing."

FN4. Markman makes much of the distinction between tracking "individual" articles of clothing and tracking "batches" of clothing and says the district court erroneously restricted the invention to the former. For purposes of this appeal, this distinction is irrelevant because Westview's system tracks neither individual articles of clothing nor batches of clothing.

[2] B. Where a party moves for JMOL in a case that has been tried to a jury, the district court

must determine whether there exists evidence of record upon which a jury might properly have returned a verdict in [the non-movant's] favor when the correct legal standard is applied. If there is not, [the movant] was entitled to have the question removed from the jury and decided as a matter of law.

Jamesbury Corp. v. Litton Indus. Prods., Inc., 756 F.2d 1556, 1560, 225 USPQ 253, 257 (Fed.Cir.1985) (emphasis added). On appeal, we review *de novo* the correctness of the district court's grant of JMOL by reapplying the JMOL standard. *Id.*; see *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 762, 9 USPQ2d 1417, 1421 (Fed.Cir.1988).

[3] Embedded within the above description of JMOL are two aspects. Factual findings made by the jury in arriving at its verdict are to be upheld unless the party moving for JMOL shows that (when the correct legal standard is applied) there is not substantial evidence to

support a finding in favor of the nonmovant. See *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 821, 23 USPQ2d 1426, 1431 (Fed.Cir.1992).

[4][5][6][7] While the jury's factual findings receive substantial deference on motion for JMOL, the legal standards that the jury applies, expressly or implicitly, in reaching its verdict are considered by the district court and by the appellate court *de novo* to determine whether those standards are correct as a matter of law. *Baltimore & Carolina Line, Inc. v. Redman*, 295 U.S. 654, 660, 55 S.Ct. 890, 893, 79 L.Ed. 1636 (1935) ("[A] federal court may take a verdict subject to the opinion of the court on a question of law...."); *Read Corp.*, 970 F.2d at 821, 23 USPQ2d at 1431; see *Elder v. Holloway*, 510 U.S. 510, ---, 114 S.Ct. 1019, 1023, 127 L.Ed.2d 344 (1994) ("[Q]uestion [s] of law ... must be resolved *de novo* on appeal."); *Bradley v. Secretary of Health and Human Servs.*, 991 F.2d 1570, 1574 n. 3 (Fed.Cir.1993) ("Legal conclusions are, of course, always reviewed *de novo*."); *Heisig v. United States*, 719 F.2d 1153, 1158 (Fed.Cir.1983); see also *Bose Corp. v. Consumers Union of United States, Inc.*, 466 U.S. 485, 501, 104 S.Ct. 1949, 1960, 80 L.Ed.2d 502 (1984) ("[A]n appellate court[] [has] power to correct errors of law, including those that may infect a so-called mixed finding of law and fact, or a finding of fact that is predicated on a misunderstanding of the governing rule of law."). Notwithstanding the jury's verdict, on review of a motion for JMOL the court retains the power and duty to say what the correct law is, and then to examine the factual issues submitted to the jury and determine whether findings thereon are supported by substantial evidence and support the verdict under the law. *Read Corp.*, 970 F.2d at 821, 23 USPQ2d at 1431; *Senmed, Inc. v. Richard-Allan Medical Indus., Inc.*, 888 F.2d 815, 818, 12 USPQ2d 1508, 1511 (Fed.Cir.1989); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1550, 220 USPQ 193, 200 (Fed.Cir.1983). [FN5]

FN5. The general rule is that in reviewing the law on a properly laid and renewed motion for JMOL, the appellate court is not bound by the instructions given the jury, even if they were not objected to. *Boyle v. United Technologies, Corp.*, 487 U.S. 500,

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513-14, 108 S.Ct. 2510, 2519, 101 L.Ed.2d 442 (1988) (unobjected to jury instructions are not law of the case for purposes of JMOL); *City of St. Louis v. Prapromik*, 485 U.S. 112, 120, 108 S.Ct. 915, 922, 99 L.Ed.2d 107 (1988); 9 Charles A. Wright & Arthur R. Miller, *Federal Practice and Procedure* § 2537, at 599-600 (1971). We therefore reject Markman's argument that we must defer to the jury's claim construction simply because the district court instructed the jury to interpret the claims and Westview did not object to this instruction. See *Wright & Miller, supra*, § 2521.

***976** Since matters of law must be reviewed *de novo* and matters of fact must be accorded substantial deference, the review of a grant of JMOL requires careful distinction between fact and law. In this case which involves claim construction and a grant of JMOL of noninfringement based on claim construction, in order to determine whether that grant was correct, we must distinguish law from fact.

[8][9] C. An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. *Read Corp.*, 970 F.2d at 821, 23 USPQ2d at 1431. The second step is comparing the properly construed claims to the device accused of infringing. *Id.* It is the first step, commonly known as claim construction or interpretation, [FN6] that is at issue in this appeal.

FN6. The dissenting opinion draws a distinction between claim interpretation and claim construction based on the distinction made in contract law. We do not make the same distinction for, in our view, the terms mean one and the same thing in patent law. See *Senmed, Inc. v. Richard-Allan Medical Indus., Inc.*, 888 F.2d 815, 818, 12 USPQ2d 1508, 1511 (Fed.Cir.1989); *Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1053, 12 USPQ2d 1474, 1476 (Fed.Cir.1989). For consistency we use the term construction when referring to the first step in an infringement analysis.

III.

A. The opinions of this court have contained some inconsistent statements as to whether and to what extent claim construction is a

legal or factual issue, or a mixed issue. Markman cites some of our cases which have statements that claim construction may be a factual or mixed issue, including *Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.H.*, 945 F.2d 1546, 1550-52, 20 USPQ2d 1332, 1336-38 (Fed.Cir.1991), and *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974, 226 USPQ 5, 8 (Fed.Cir.1985).

At its inception, the Federal Circuit held that claim construction was a matter of law. Our first opinion deciding a question of claim construction, *SSIH Equip. S.A. v. United States Int'l Trade Comm'n*, 718 F.2d 365, 376, 218 USPQ 678, 688 (Fed.Cir.1983) (originally reported at 713 F.2d 746-60), said so explicitly, resting on the authority of *Winans v. Denmead*, 56 U.S. (15 How.) 330, 14 L.Ed. 717 (1853). Cases following *SSIH* include *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 770-71, 218 USPQ 781, 788 (Fed.Cir.1983), *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1569-71, 219 USPQ 1137, 1140-42 (Fed.Cir.1983), and *SRI Int'l v. Matsushita Elec. Corp. of America*, 775 F.2d 1107, 1118-22, 1138-40, 227 USPQ 577, 583-86, 596-97 (Fed.Cir.1985) (in banc).

The first Federal Circuit case to deviate from this precedent and state that claim construction may have underlying factual inquiries that must be submitted to a jury was *McGill Inc. v. John Zink Co.*, 736 F.2d 666, 221 USPQ 944 (Fed.Cir.1984). In *McGill*, the court stated that

[i]f ... the meaning of a term of art in the claims is disputed and extrinsic evidence is needed to explain the meaning, construction of the claims could be left to a jury. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753 [221 USPQ 473] (Fed.Cir.1984); cf. *Hong Kong Export Credit Insurance Corp. v. Dun & Bradstreet*, 414 F.Supp. 153, 157 (S.D.N.Y.1975). In the latter instance, the jury cannot be directed to the disputed meaning for the term of art. Cf. *Butler v. Local Union 823, International Brotherhood of Teamsters*, 514 F.2d 442, 452 (8th Cir.), cert. denied, 423 U.S. 924, 96 S.Ct. 265, 46 L.Ed.2d 249 (1975).

Id. at 672, 221 USPQ at 948. A review of the authority relied on for this statement of

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law, however, is revealing. In contradistinction to the proposition for which it is cited, *Envirotech* in fact states "[t]he patented invention as indicated by the language of the claims must first be defined (a question of law), and then the trier must judge whether the claims cover the accused device (a question of fact)." *Id.* at 758, 221 USPQ at 477 (emphasis added). Thus *Envirotech* is entirely consistent with the earlier precedent. [FN7] The other *977 two cases relied upon, the district court opinion in *Hong Kong Export Credit* and the Eighth Circuit opinion in *Butler*, are contract cases. Thus this court's earliest pronouncement of jury triable fact issues in claim construction cites no authoritative support.

FN7. The views of the "special concurrence" in *Envirotech*, contending that the claims on appeal had been properly submitted to the jury and were not reviewed *de novo* on appeal, were not adopted by the majority opinion. 730 F.2d at 763, 221 USPQ at 481 (Baldwin, J., specially concurring). Accordingly, the concurrence's "spin" on the case is not the position of the court.

Cases following the *McGill* view of claim construction provide no firmer basis for the view. Nevertheless, a significant line of cases has developed in our precedent stating (although rarely holding) that there may be jury triable fact issues in claim construction, relying on *McGill* (and its erroneous interpretation of *Envirotech*) and its progeny. See *Bio-Rad Labs, Inc. v. Nicolet Instrument Corp.*, 739 F.2d 604, 614, 222 USPQ 654, 661 (Fed.Cir.1984) (relying on *Envirotech*); *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974, 226 USPQ 5, 8 (Fed.Cir.1985) (no authority cited); [FN8] *Moeller v. Ionetics, Inc.*, 794 F.2d 653, 657, 229 USPQ 992, 995 (Fed.Cir.1986) (citing *Palumbo*); *H.H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 389, 2 USPQ2d 1926, 1929 (Fed.Cir.1987) (citing *Moeller* and *Palumbo*); *Perini America, Inc. v. Paper Converting Machine Co.*, 832 F.2d 581, 584, 4 USPQ2d 1621, 1624 (Fed.Cir.1987) (citing *Palumbo* and *McGill*). The language from these opinions, to the effect that disputes over the meaning of claim language may raise factual questions reviewed for substantial evidence or clear

error, as the case may be, continued to propagate through our precedent. This line of cases culminated in *Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.H.*, 945 F.2d 1546, 20 USPQ2d 1332 (Fed.Cir.1991), in which this court affirmed a denial of a motion for judgment n.o.v., reasoning that

FN8. *Palumbo* also presented the issue of construction of means-plus-function claim limitations under 35 U.S.C. § 112, para. 6. As that issue is not before us today, we express no opinion on the issue of whether a determination of equivalents under § 112, para. 6 is a question of law or fact.

[i]nterpretation of the claim words [at issue] required that the jury give consideration and weight to several underlying factual questions, including in this case the description of the claimed element in the specification, the intended meaning and usage of the claim terms by the patentee, what transpired during the prosecution of the patent application, and the technological evidence offered by the expert witnesses. *Id.* at 1550, 20 USPQ2d at 1336.

On the other hand, a second line of Federal Circuit opinions has continued to follow the earlier pronouncements that claim construction is strictly a question of law for the court. See *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 986, 6 USPQ2d 1601, 1604 (Fed.Cir.1988); *Senmed*, 888 F.2d at 818-20, 12 USPQ2d at 1511-13; *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1561-63, 19 USPQ2d 1500, 1503-04 (Fed.Cir.1991); *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88, 21 USPQ2d 1383, 1386-87 (Fed.Cir.1992); *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 822-23, 23 USPQ2d 1426, 1432-33 (Fed.Cir.1992).

B. Notwithstanding the apparent inconsistencies in our opinions, the Supreme Court has repeatedly held that the construction of a patent claim is a matter of law exclusively for the court. *Hogg v. Emerson*, 47 U.S. (6 How.) 437, 484, 12 L.Ed. 505 (1848); *Silsby v. Foote*, 55 U.S. (14 How.) 218, 225, 14 L.Ed. 391 (1853); *Winans v. Denmead*, 56 U.S. (15 How.) at 338; *Winans v. New York & Erie R.R. Co.*, 62 U.S. (21 How.) 88, 100, 16 L.Ed.

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68 (1859); *Bischoff v. Wethered*, 76 U.S. (9 Wall.) 812, 816, 19 L.Ed. 829 (1870); *Heald v. Rice*, 104 U.S. 737, 749, 26 L.Ed. 910 (1882); *Coupe v. Royer*, 155 U.S. 565, 579-80, 15 S.Ct. 199, 205, 39 L.Ed. 263 (1895); *Market St. Cable Ry. Co. v. Rowley*, 155 U.S. 621, 625, 15 S.Ct. 224, 226, 39 L.Ed. 284 (1895); *Singer Mfg. Co. v. Cramer*, 192 U.S. 265, 275, 24 S.Ct. 291, 295, 48 L.Ed. 437 (1904); see also 2 William C. Robinson, *The Law of Patents for Useful Inventions* § 731, at 481 (1890) (hereinafter Robinson on Patents); George T. Curtis, *A Treatise on the Law of Patents for Useful Inventions* § 222, at 251 (4th ed. 1873) (hereinafter *Curtis on Patents*). [*978 FN9] Time and again the Supreme Court has itself resolved disputes over the construction of claims as a matter of law. See, e.g., *Coupe v. Royer*, 155 U.S. at 574- 75, 579, 15 S.Ct. at 203, 205 (stating that court defines the scope of the claims and reversing the trial judge's erroneous claim construction); *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 275, 24 L.Ed. 344 (1877) (resolving claim construction contentions on the basis of an exhaustive review of the patent and its discussion of the relevant art).

FN9. The Supreme Court has also in equity cases considered the scope of a patent to be a matter of law, not subject to deferential review. See *Seymour v. Osborne*, 78 U.S. (11 Wall.) 516, 546, 20 L.Ed. 33 (1871); *Bates v. Coe*, 98 U.S. 31, 38-39, 25 L.Ed. 68 (1879); *Goodyear Dental Vulcanite Co. v. Davis*, 102 U.S. 222, 224, 26 L.Ed. 149 (1880); *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 134, 62 S.Ct. 513, 517, 86 L.Ed. 736, 52 USPQ 275, 279 (1942).

The reason that the courts construe patent claims as a matter of law and should not give such task to the jury as a factual matter is straightforward: It has long been and continues to be a fundamental principle of American law that "the construction of a written evidence is exclusively with the court." *Levy v. Gadsby*, 7 U.S. (3 Cranch) 180, 186, 2 L.Ed. 404 (1805) (Marshall, C.J.); *Eddy v. Prudence Bonds Corp.*, 165 F.2d 157, 163 (2d Cir.1947) (Learned Hand, J.) ("[A]ppellate courts have untrammelled power to interpret written documents."); 4 Samuel Williston, *Williston on Contracts* § 601, at 303 (3d ed. 1961)

(hereinafter *Williston on Contracts*) ("Upon countless occasions, the courts have declared it to be the responsibility of the judge to interpret and construe written instruments, whatever their nature.") (footnotes omitted).

The patent is a fully integrated written instrument. By statute, the patent must provide a written description of the invention that will enable one of ordinary skill in the art to make and use it. 35 U.S.C. § 112, para. 1. Section 112, para. 2, also requires the applicant for a patent to conclude the specification with claims "particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." It follows, therefore, from the general rule applicable to written instruments that a patent is uniquely suited for having its meaning and scope determined entirely by a court as a matter of law. *Bates v. Coe*, 98 U.S. at 38 ("[T]he claims of the patent, like other provisions in writing, must be reasonably construed...."); *Merrill v. Yeomans*, 94 U.S. 568, 571, 24 L.Ed. 235 (1877) (construing the patent in part by applying "well-settled rules of construing all instruments"); accord *Doble Eng'g Co. v. Leeds & Northrup Co.*, 134 F.2d 78, 83, 56 USPQ 426, 432 (1st Cir.1943) ("It appears to be firmly established that ... a patent is subject to the same general rules of construction as any other written instrument."); 2 Robinson on Patents, *supra*, § 732, at 481-82; 1 Anthony W. Deller, *Patent Claims* § 21 (2d ed. 1971).

There is much wisdom to the rule that the construction of a patent should be a legal matter for a court. A patent is a government grant of rights to the patentee. 35 U.S.C. § 154. By this grant, the patentee owns the rights for a limited time to exclude others from making, using, or selling the invention as claimed. *Id.*; see *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539, 548, 14 L.Ed. 532 (1852). Infringement of the patentee's right to exclude carries with it the potential for serious consequences: The infringer may be enjoined and required to pay increased damages, costs and attorney fees. See 35 U.S.C. §§ 283-285. When a court construes the claims of the patent, it "is as if the construction fixed by the

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court had been incorporated in the specification," *Curtis on Patents, supra*, § 452, at 609, and in this way the court is defining the federal legal rights created by the patent document.

Further, it is only fair (and statutorily required) that competitors be able to ascertain to a reasonable degree the scope of the patentee's right to exclude. *Merrill v. Yeomans*, 94 U.S. at 573-74 ("It seems to us that nothing can be more just and fair, both to the patentee and to the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent."); *Hogg v. Emerson*, 47 U.S. (6 How.) at 484. They may understand what is the scope of the patent *979 owner's rights by obtaining the patent and prosecution history--"the undisputed public record," *Senmed*, 888 F.2d at 819 n. 8, 12 USPQ2d at 1512 n. 8--and applying established rules of construction to the language of the patent claim in the context of the patent. Moreover, competitors should be able to rest assured, if infringement litigation occurs, that a judge, trained in the law, will similarly analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and consistent scope of the patent owner's rights to be given legal effect.

Arriving at a true and consistent scope of the claims also works to the benefit of the patentee, as Professor Robinson eloquently observed:

To treat the nature of the patented invention as a matter of fact, to be inquired of and determined by a jury, would at once deprive the inventor of the opportunity to obtain a permanent and universal definition of his rights under the patent, and in each case of infringement it would subject him to the danger of false interpretation, from the consequences of which he could not escape. By confiding this duty to the court, however, its decision as to the nature of the patented invention becomes reviewable to the same extent as any other legal question, and when his patent has received the interpretation of the Supreme Court of the United States the

inventor can maintain his privilege, as thus interpreted, against all opponents without further controversy in reference to its true limitations. 2 *Robinson on Patents, supra*, § 733, at 483-84.

[10] We therefore settle inconsistencies in our precedent and hold that in a case tried to a jury, the court has the power and obligation to construe as a matter of law the meaning of language used in the patent claim. As such, "[a] patent covers the invention or inventions which the court, in construing its provisions, decides that it describes and claims." 3 *Robinson on Patents, supra*, § 1019, at 247. Because claim construction is a matter of law, the construction given the claims is reviewed *de novo* on appeal. Accordingly, Markman's principal argument that the district court erred in taking the issue of claim construction away from the jury is itself legally erroneous.

IV.

A. Markman argues that the jury's implied construction of the claims is correct and that the district court's construction of the claims is wrong, thereby necessitating that this court reinstate the jury's verdict. Markman contends that the jury properly considered all the evidence of record on the disputed claim term "inventory" in reaching its implicit conclusion that the term does not require articles of clothing. We find that these arguments are not convincing and we reach a conclusion that is in accord with the district court's construction of the claims.

"To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history." *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1561 (Fed.Cir.1991); *accord Autogiro Co. of Am. v. United States*, 384 F.2d 391, 396-98, 181 Ct.Cl. 55, 155 USPQ 697, 701-03 (1967). "Expert testimony, including evidence of how those skilled in the art would interpret the claims, may also be used." *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 631 (Fed.Cir.1987). In construing the claims in this case, all these sources, as well as extrinsic evidence in the form of Westview's sales

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literature, were included in the record of the trial court proceedings.

[11][12] Claims must be read in view of the specification, of which they are a part. *Autogiro*, 384 F.2d at 397, 155 USPQ at 702; see *Winans v. Denmead*, 56 U.S. (15 How.) at 338; *Bates v. Coe*, 98 U.S. at 38-39. The specification contains a written description of the invention that must enable one of ordinary skill in the art to make and use the invention. For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. See *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 621 (CCPA 1970) ("Occasionally the disclosure will serve as a dictionary for terms appearing *980 in the claims, and in such instances the disclosure may be used in interpreting the coverage of the claim."). As we have often stated, a patentee is free to be his own lexicographer. *Autogiro*, 384 F.2d at 397, 155 USPQ at 702. The caveat is that any special definition given to a word must be clearly defined in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388, 21 USPQ2d 1383, 1386 (Fed.Cir.1992). The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims.

[13][14][15] To construe claim language, the court should also consider the patent's prosecution history, if it is in evidence. *Graham v. John Deere Co.*, 383 U.S. 1, 33, 86 S.Ct. 684, 701, 15 L.Ed.2d 545, 148 USPQ 459, 473 (1966). This "undisputed public record" of proceedings in the Patent and Trademark Office is of primary significance in understanding the claims. See *Autogiro*, 384 F.2d at 397, 155 USPQ at 702 (the "file wrapper" is "part [] of the patent"). The court has broad power to look as a matter of law to the prosecution history of the patent in order to ascertain the true meaning of language used in the patent claims:

Th[e] construction of the patent is confirmed by the avowed understanding of the patentee, expressed by him, or on his half [sic], when his application for the original patent was pending.... [W]hen a patent bears on its face

a particular construction, inasmuch as the specification and claim are in the words of the patentee, ... such a construction may be confirmed by what the patentee said when he was making his application.

Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 227, 26 L.Ed. 149 (1880); see *Singer Mfg. Co.*, 192 U.S. at 278-85, 24 S.Ct. at 296-99 (construing the claims in light of the prosecution history as a matter of law). [FN10] Although the prosecution history can and should be used to understand the language used in the claims, it too cannot "enlarge, diminish, or vary" the limitations in the claims. *Goodyear Dental Vulcanite Co.*, 102 U.S. at 227; *Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1054, 12 USPQ2d 1474, 1477 (Fed.Cir.1989).

FN10. *Accord SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1120, 227 USPQ 577, 585 (Fed.Cir.1985) (in banc) ("the district court's construction of the claims in light of the prosecution history [is] a question of law"); *Lemelson v. United States*, 752 F.2d 1538, 1550, 1552, 224 USPQ 526, 533 (Fed.Cir.1985) ("The prosecution histories being admitted into evidence, the court should have considered them in its construction of the claims."); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1270, 229 USPQ 805, 811 (Fed.Cir.1986) ("[T]he prosecution history can and should, where relevant, be assessed (along with, e.g., claim language and specification) in properly interpreting claim language."); *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1283, 230 USPQ 45, 47 (Fed.Cir.1986) ("in view of the prosecution history the district court correctly interpreted the literal meaning of" the claim language at issue); 6 Ernest B. Lipscomb III, *Walker on Patents* § 21:1, at 261 (3d ed. 1987) ("The words of a patent or patent application, like the words of specific claims therein, always raise a question of law for the court....").

[16] Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises. This evidence may be helpful to explain scientific principles, the meaning of technical terms, and terms of art that appear in the patent and prosecution history. Extrinsic evidence may

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demonstrate the state of the prior art at the time of the invention. It is useful "to show what was then old, to distinguish what was new, and to aid the court in the construction of the patent." *Brown v. Piper*, 91 U.S. 37, 41, 23 L.Ed. 200 (1875).

[17] The court may, in its discretion, receive extrinsic evidence in order "to aid the court in coming to a correct conclusion" as to the "true meaning of the language employed" in the patent. *Seymour v. Osborne*, 78 U.S. (11 Wall.) 516, 546, 20 L.Ed. 33 (1871) (reviewing a decree in equity); see *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 233, 63 S.Ct. 165, 168, 87 L.Ed. 232, 55 USPQ 381, 384 (1942) (the court construed the claim by relying in part on the testimony of one of the patentees as the "clearest exposition of the significance which the terms employed in the claims had for those skilled in the art"); *981 *U.S. Indus. Chems., Inc. v. Carbide & Carbon Chems. Corp.*, 315 U.S. 668, 678, 62 S.Ct. 839, 844, 86 L.Ed. 1105, 53 USPQ 6, 10 (1942) ("[I]t is permissible, and often necessary, to receive expert evidence to ascertain the meaning of a technical or scientific term or term of art so that the court may be aided in understanding ... what [the instruments] actually say."); *Winans v. New York & Erie R.R. Co.*, 62 U.S. (21 How.) at 101 ("[P]rofessors or mechanics cannot be received to prove to the court or jury what is the proper or legal construction of any instrument of writing. A judge may obtain information from them, if he desire it, on matters which he does not clearly comprehend, but cannot be compelled to receive their opinions as matter of evidence."); *Marsh v. Quick-Meal Stove Co.*, 51 F. 203 (C.C.D.Mo.1892) ("It is the province of the court to construe the claims of the patent that has been offered in evidence. That construction, of course, is to be made in the light of such expert testimony as has been offered."); 3 *Robinson on Patents*, *supra*, §§ 1012-15, 1019-20; accord *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 573 (Fed.Cir.1984) ("A trial judge has sole discretion to decide whether or not he needs, or even just desires, an expert's assistance to understand a patent. We will not disturb that discretionary decision

except in the clearest case."); *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 887 F.2d 1070, 1076, 12 USPQ2d 1539, 1544 (Fed.Cir.1989) (Newman, J., dissenting) ("The purpose of expert testimony is to provide assistance to the court in understanding, when the claims are technologically complex or linguistically obscure, how a technician in the field, reading the patent, would understand the claims.") (emphasis added).

[18][19] Extrinsic evidence is to be used for the court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims. *U.S. Indus. Chems., Inc.*, 315 U.S. at 678, 62 S.Ct. at 844, 53 USPQ at 10; *Catalin Corp. of Am. v. Catalazuli Mfg. Co.*, 79 F.2d 593, 594, 27 USPQ 371, 373 (2d Cir.1935) (Learned Hand, J.) ("If the doctrine of the 'integration' of a written instrument has any basis at all, surely it should apply to such a document ... [as the patent]."); 3 *Robinson on Patents*, *supra*, § 1019, at 247-48. When, after considering the extrinsic evidence, the court finally arrives at an understanding of the language as used in the patent and prosecution history, the court must then pronounce as a matter of law the meaning of that language. See *Loom Co. v. Higgins*, 105 U.S. 580, 586, 26 L.Ed. 1177 (1881). This ordinarily can be accomplished by the court in framing its charge to the jury, but may also be done in the context of dispositive motions such as those seeking judgment as a matter of law.

Through this process of construing claims by, among other things, using certain extrinsic evidence that the court finds helpful and rejecting other evidence as unhelpful, and resolving disputes *en route* to pronouncing the meaning of claim language as a matter of law based on the patent documents themselves, the court is *not* crediting certain evidence over other evidence or making factual evidentiary findings. Rather, the court is looking to the extrinsic evidence to assist in its construction of the written document, a task it is required to perform. [FN11] The district court's claim construction, enlightened by such extrinsic evidence as may be helpful, is still based upon the patent and prosecution history. It is

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therefore still construction, and is a matter of law subject to *de novo* review.

FN11. For an example of very thorough appellate review of claim construction based on the patent in view of extrinsic evidence, see *Mitchell v. Tilghman*, 86 U.S. (19 Wall.) 287, 379-90, 22 L.Ed. 125 (1874).

[20][21] B. Applying this analysis of claim construction, we conclude that (1) the trial court did not abuse its discretion when it admitted the extrinsic evidence offered by Markman--Markman's testimony and the testimony of Markman's "patent expert"--on the issue of claim construction, and that (2) the trial court properly rejected this extrinsic evidence to the extent it contradicted the court's construction of the claims based on the specification and prosecution history. Although in this case the trial court might have granted Westview's motion for directed verdict and should have instructed the jury *982 as to the meaning of the claims (including the disputed term "inventory"), its failure to do so was rendered harmless by the court's subsequent response to Westview's post-trial motion.

[22] We agree with the trial court that the term "inventory" refers, at least in part, to articles of clothing, contrary to Markman's contention that "inventory" may be limited to just cash or inventory receipts. As the district court noted, the claim phrase "detect and localize spurious additions to inventory as well as spurious deletions therefrom" does not make sense using Markman's definition of "inventory." Dollars or invoice totals are not "localized" since dollars do not travel through the cleaning process and the location of invoices is irrelevant. Location is relevant to clothing, since it moves through and sometimes without the establishment, where it can be lost, stolen, or damaged. Also, "spurious" additions and deletions logically relate to clothing because "dollars" would not be spuriously added to a dry-cleaner's inventory. Thus, the language of the claim itself suggests the conclusion that the dry-cleaner's "inventory" includes clothing.

The patent specification confirms this. The specification is pervasive in using the term "inventory" to consist of "articles of clothing." Rather than set forth each instance, we refer the reader to a few examples:

This invention relates to inventory control devices capable of monitoring and reporting upon the status, location and throughput of inventory in an establishment. [Col. 1, lines 12-17.]

The best inventory control and management reporting information systems has [sic] the ability to determine and report the current location of any given article [[FN12]] in inventory. [Col. 5, lines 14-17.]

FN12. It is undisputed that "article" means "article of clothing."

Every transaction is recorded, including identification of the articles placed in inventory. [Col. 5, lines 8-10.]

[I]ncoming articles to be placed in inventory are accumulated over a counter.... [Col. 6, lines 7-8.]

[A]rticles to be cleaned are associated with a unique bar code indicia for later automatic or semiautomatic optical scanning and data input, whereby the progress of articles through the laundry and drycleaning systems can be completely monitored. [Col. 2, lines 53-57.]

The prosecution history is also in accord. During prosecution of the original patent application in this case, Markman amended claim 1 in order to overcome an obviousness rejection by adding limitations reciting among other things "whereby said system can detect and localize spurious additions to inventory as well as spurious deletions therefrom." Markman argued in his remarks to the examiner that

unlike the usual system in which apparatus generates non-unique indicia (e.g., Stewart's price indicia) and/or indicia that is [sic] not produced concurrently with the commencement of a transaction (e.g., pre-printed tags), applicant's system is operable to keep a running reconcilable inventory total by adding input articles and subtracting output articles, and also protects against the

(Cite as: 52 F.3d 967, *982)

possibility of undocumented or spuriously-documented articles entering the system. [Emphasis in original.]

Markman also referred the examiner to "features present" in claim 1, explaining: Means are also provided for reconciling the very same unique and concurrently-generated indicia at later points during processing whereby the entry or exit of inventory articles in irregular ways can be localized.

Also, the prosecution history of the patent on reissue conflicts with Markman's argument now that claim 1 does not require "tracking" of articles of clothing. In order to obtain other claims in the reissue patent broader than claim 1, which was carried through to the reissue patent, Markman explained the scope of the original claims thusly:

1. *Tracking of Individual Articles*

It may be argued that the claims are limited to a system that tracks individual articles such as individual pieces of clothing brought by a single consumer to a *983 drycleaning establishment or the like. I believe that tracking of a transaction whether it involves one article or several is properly disclosed and allowable. The claim language recites entry of "descriptions of each of said articles associated with the transactions". This passage is more limited than I had a right to claim because, although individual articles, e.g. a pair of pants, could be accounted for by individual marking, scanning and reconciliation in reports, the grouping of such articles into sets for tracking (e.g., a suit comprising pants under jacket and/or a suit and a Dress or other spearable [sic] articles grouped together) is reasonably disclosed as forming part of the invention and is allowable over the prior art.

It is evident from Markman's explanation of the claims to the examiner that he used "inventory" in the patent and the examiner understood "inventory" to consist of "articles of clothing." The prosecution history thus confirms the meaning of "inventory" as including "articles of clothing."

Markman argues that the extrinsic evidence of record provides substantial evidence in

support of the jury's and his claim construction. Markman testified as an inventor of the patent in suit and as one of ordinary skill in the art (or, perhaps more accurately, one of "extraordinary" skill in the art) that "inventory" did not need to include articles of clothing. Markman's "patent expert" testified likewise, when giving his opinion on the proper construction of the claims. Finally, Markman argues that the testimony of Westview's president and some of its sales literature also support such claim construction. We do not find Markman's arguments persuasive.

[23] First, the testimony of Markman and his patent attorney on the proper construction of the claims is entitled to no deference. For example, they both testified as to how the patent should be construed based on the text of the patent. This testimony about construction, however, amounts to no more than legal opinion—it is precisely the process of construction that the court must undertake. Thus, as to these types of opinions, the court has complete discretion to adopt the expert legal opinion as its own, to find guidance from it, or to ignore it entirely, or even to exclude it. See *Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 797, 17 USPQ2d 1097, 1100 (Fed.Cir.1990). When legal "experts" offer their conflicting views of how the patent should be construed, or where the legal expert's view of how the patent should be construed conflicts with the patent document itself, such conflict does not create a question of fact nor can the expert opinion bind the court or relieve the court of its obligation to construe the claims according to the tenor of the patent. This opinion testimony also does not change or affect the *de novo* appellate review standard for ascertaining the meaning of the claim language. Thus, to the extent they were testifying about construction itself, we reject Markman's and Markman's patent expert's testimony as having any controlling effect on what the court below and we perceive to be the meaning of "inventory" as used in the patent and prosecution history.

[24] Second, the extrinsic evidence of record cannot be relied on to change the meaning of

(Cite as: 52 F.3d 967, *983)

the claims. In this case, as fully discussed above, the patent and prosecution history make clear that "inventory" in claim 1 includes in its meaning "articles of clothing." The district court exercised its discretion in finding unhelpful Markman's testimony that he meant "inventory," or that one of ordinary skill in the art would understand "inventory," to mean something to the contrary, and furthermore the district court rejected the testimony as conflicting with the meaning derived from the patent and prosecution history. In our construction of the claim term "inventory," we too find unhelpful and reject Markman's testimony. Similarly, even if they in fact used "inventory" to mean other than articles of clothing, Westview's sales literature and the testimony of its president do not dissuade us from our legal construction of the claim, based on the patent and prosecution history, that the claim term "inventory" means articles of clothing.

V.

[25] A. This decision that claim construction is properly viewed solely as a question *984 of law is consistent with precedent of the Supreme Court and much of this court's precedent. Yet the dissenting and one of the concurring opinions assert that our decision violates the Seventh Amendment. A close analysis of the bases underlying their arguments reveals, however, that they are unsupported by logic and precedent.

The Seventh Amendment provides "[i]n suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved." U.S. Const. amend. VII. Thus, if an action could be tried to a jury in 1791, the right to a jury trial is preserved. The Seventh Amendment has also been judicially interpreted as extending the right to jury trial to statutory causes of action analogous to common law actions. *Tull v. United States*, 481 U.S. 412, 417, 107 S.Ct. 1831, 1835, 95 L.Ed.2d 365 (1987).

The dissenting and one of the concurring opinions express in somewhat different ways why they believe our holding deprives

plaintiffs of the constitutional right to a jury trial in patent infringement cases. The dissenting opinion argues there are jury triable factual inquiries involved in determining the scope of a claim and this determination is part of and often dispositive of patent infringement questions. One concurring opinion, which apparently acknowledges that sometimes claim construction is a legal question for the court, nonetheless finds a majority effort to indirectly create a "complexity exception" to the right to jury trial in patent infringement cases that will allow a three judge panel of this court to "do pretty much what it wants under its de novo retrial."

These arguments do not ring true. In this opinion we do not deprive parties of their right to a jury trial in patent infringement cases. Our opinion merely holds that part of the infringement inquiry, construing and determining the scope of the claims in a patent, is strictly a legal question for the court. [FN13] The patentee's right to a jury trial on the application of the properly construed claim to the accused device is preserved as it was in 1791.

FN13. Our opinion also holds that we review district court determinations on questions of claim construction under a *de novo* standard of review, like other legal questions. In this regard, we emphasize that we are reiterating the long-recognized appellate review standard for issues of law in the trial proceeding, regardless of whether the case was tried to a judge or a jury. Contrary to the contentions of the dissenting opinion, this does not "effect[] a dramatic realignment of jury, judge, and the appellate process."

Any constitutional concerns raised by this opinion must be limited to the issue of claim construction. It is significant that neither the dissenting nor the concurring opinions cite any cases supporting the proposition that claim construction was a question of fact or involved triable issues of fact to a jury in or prior to 1791. None of the briefs of the parties or amici cite such a case, nor have we found any. The search for such a case may well be a fruitless one because of the manifest

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differences in patent law in eighteenth century England and patent law as it exists today in Title 35 of the United States Code. See *Hogg*, 47 U.S. (6 How.) at 479-83 (citing the significant differences between English law and United States law and cautioning against reliance on the former when applying the latter); Emerson Stringham, *Outline of Patent Law* § 5000, at 266-67 (1937) ("The patent claim, first developed in the United States, is now largely relied upon as defining the scope of protections....") (emphasis added). See generally, P.J. Federico, *Origin and Early History of Patents*, 11 J.Pat.Off.Soc'y 292 (1929).

[26] B. The dissenting and one of the concurring opinions attempt to make the case that construing claims is analogous to construing and interpreting contracts, deeds, and wills. Traditionally courts have treated the construction of these documents as being a legal question for the court, but have stated that under certain circumstances the interpretation of an agreement may raise jury triable questions. Thus, by analogy, the argument is made that although claim construction may indeed be a question of law for the court, it also involves (or, in the argument of the concurrence, may involve) triable issues of fact.

The analogy of a patent to a contract may appear to some extent to be an appropriate *985 way of describing the circumstances surrounding the issuance of a patent. [FN14] The inventor is required to make full disclosure of his invention to the Patent and Trademark Office (PTO) and to the public in his patent specification, which he is otherwise not obligated to do. In return, the law allows the government to confer a property right to exclude anyone else from making, using, or selling the invention covered by the claims for seventeen years, which it is otherwise not obligated to do.

FN14. A patent, however, is not a contract. Contracts are executory in nature--they contain promises that must be performed. See E. Allan Farnsworth, *Contracts* § 1.1, at 3-4 (2d ed. 1990). Once a patent is issued, any purported exchange of promises between the applicant and the Patent and

Trademark Office (PTO) has been fully executed. A patent is a statutory grant of the right to exclude others from making, using, or selling the invention recited in the claims, read in light of the specification. 35 U.S.C. § 154. There is no discretion on the part of the PTO as to whether or not to grant the patent--if the statutory requirements are met, a patent is issued. 35 U.S.C. § 151. Likewise, the other party to the transaction, the patentee, cannot "contract" with any one other than the federal government to receive a right to exclude others from making, using, or selling his invention. See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 162, 109 S.Ct. 971, 983, 103 L.Ed.2d 118 (1989).

The analogy of a patent to a contract is not useful, however, in the context of a patent infringement suit. Patents are not contracts per se and patent infringement actions have never been viewed as breach of contract actions. Patent infringement has often been described as a tort. In a patent infringement suit, the inventor sues a competitor for infringing upon his right to exclude. The competitor is never a party to the so-called "contract" between the government and the inventor. See *Keystone*, 95 U.S. at 279 ("As patents are procured *ex parte*, the public is not bound by them, but the patentees are."). Nor does the competitor ever breach this contract between the government and the inventor by making, using, or selling the accused devices.

Questions of fact may arise in construing contracts, deeds, or wills in two contexts. First, the document may not reflect the agreement between, or the intent of, the two parties. Thus, unless the document is fully integrated and the parol evidence rule (or its equivalent in the other areas of law) applies, extrinsic evidence may be offered to demonstrate different or additional terms. There is no parol evidence rule in patent law for obvious reasons. It is axiomatic that the invention protected by the patent must be covered by the claims, otherwise it is lost. *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 510, 37 S.Ct. 416, 418, 61 L.Ed. 871 (1917). Parol or other extrinsic evidence cannot add, subtract, or vary the limitations of the claims.

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A question of fact may also arise in construing contracts, deeds, or wills when there is an ambiguous term. In this situation, the parol evidence rule does not apply and extrinsic evidence may be offered to demonstrate what the parties intended when they used the term. Thus the factual inquiry for the jury in these cases focuses on the subjective intent of the parties when they entered into the agreement.

No inquiry as to the subjective intent of the applicant or PTO is appropriate or even possible in the context of a patent infringement suit. The subjective intent of the inventor when he used a particular term is of little or no probative weight in determining the scope of a claim (except as documented in the prosecution history). See *Senmed*, 888 F.2d at 817 n. 8, 12 USPQ2d at 1512 n. 8. In fact, commonly the claims are drafted by the inventor's patent solicitor and they may even be drafted by the patent examiner in an examiner's amendment (subject to the approval of the inventor's solicitor). See Manual of Patent Examining Procedure (MPEP) § 1302.04 (Rev. 15, Aug. 1993) ("Examiner's Amendments and Changes"). While presumably the inventor has approved any changes to the claim scope that have occurred via amendment during the prosecution process, it is not unusual for there to be a significant difference between what an inventor thinks his patented invention is and what the ultimate scope of the claims is after allowance by the PTO. See generally *Senmed*, 888 F.2d at 819 n. 8, 12 USPQ2d at 1521 n. 8. Of course the views of the other party to the "patent contract," the government, are generally not *986 obtainable, except as reflected in the prosecution history. See *Western Elec. Co. v. Piezo Tech., Inc.*, 860 F.2d 428, 432-33, 8 USPQ2d 1853, 1856-57 (Fed.Cir.1988); MPEP § 1701.01 ("Office personnel not to testify").

Thus the focus in construing disputed terms in claim language is not the subjective intent of the parties to the patent contract when they used a particular term. Rather the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would

have understood the term to mean.

Moreover, ideally there should be no "ambiguity" in claim language to one of ordinary skill in the art that would require resort to evidence outside the specification and prosecution history. Section 112 of Title 35 requires that specifications "contain a written description of the invention, and of the manner and process of making and using it, in such *full, clear, concise, and exact* terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same ..." and requires that the specification "shall conclude with one or more claims *particularly pointing out and distinctly claiming* the subject matter which the applicant regards as his invention." 35 U.S.C. § 112 (emphasis added). This statutory language has as its purpose the avoidance of the kind of ambiguity that allows introduction of extrinsic evidence in the contract law analogy. See, e.g., *Keystone*, 95 U.S. at 278 ("When the terms of a claim in a patent are clear and distinct (*as they always should be*), the patentee, in a suit brought upon the patent, is bound by it.") (emphasis added). Patent applications, unlike contracts, are reviewed by patent examiners, quasi-judicial officials trained in the law and presumed to "have some expertise in interpreting the [prior art] references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents." *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359, 220 USPQ 763, 770 (Fed.Cir.1984). See also *Western Electric*, 860 F.2d at 431, 8 USPQ2d at 1857. If the patent's claims are sufficiently unambiguous for the PTO, there should exist no factual ambiguity when those same claims are later construed by a court of law in an infringement action. See *Intervet Am.*, 887 F.2d at 1053, 12 USPQ2d at 1476 ("Ambiguity, undue breadth, vagueness, and triviality are matters that go to claim *validity* for failure to comply with 35 U.S.C. § 112-¶ 2, not to interpretation or construction.") (emphasis in original).

This does not mean there is never a need for extrinsic evidence in a patent infringement suit. A judge is not usually a person

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conversant in the particular technical art involved and is not the hypothetical person skilled in the art to whom a patent is addressed. Extrinsic evidence, therefore, may be necessary to inform the court about the language in which the patent is written. But this evidence is not for the purpose of clarifying ambiguity in claim terminology. It is not ambiguity in the document that creates the need for extrinsic evidence but rather unfamiliarity of the court with the terminology of the art to which the patent is addressed.

Accordingly, the contract, deed, and will cases relied upon in the dissenting and concurring opinions serve only to highlight the differences between claim construction in a patent infringement case and contract interpretation in a breach of contract suit or construction/interpretation of a will in a will contest. They reflect the court's concern with finding the "true" intention of the parties to an agreement, deed, or will. [FN15] This *987 sort of inquiry is not appropriate, or even possible, in the context of patent litigation. Infringement litigation may involve multiple actions against different defendants none of whom has any personal knowledge of or participation in the PTO proceedings where the give and take that results in the negotiated claim language occurs. Thus there can be no search for the defendant party's intent.

FN15. Illustrative of the search for the intent of the parties or the makers are the following opinions cited in the dissenting and concurring opinions. *Goddard v. Foster*, 84 U.S. (17 Wall.) 123, 142-43, 21 L.Ed. 589 (1873) (in a contract between two parties, courts "are not denied the same light and information the parties enjoyed when the contract was executed, but they may acquaint themselves with the persons and circumstances that are the subjects of the statements in the written agreement"); *Brown & Co. v. McGran*, 39 U.S. (14 Pet.) 479, 493, 10 L.Ed. 550 (1840) ("[T]he true interpretation of the language may be left to the consideration of the jury for the purpose of carrying into effect the real intention of the parties."); *Startex Drilling Co. v. Sohio Petroleum Co.*, 680 F.2d 412, 415 (5th Cir.1982) (submitting case to jury "to determine what the

parties meant" by ambiguous terms in the contract); *In re Union Trust Co.*, 89 Misc. 69, 151 N.Y.S. 246, 249 (Sur.Ct.) ("The first and cardinal rule of interpretation of wills is the application of the meaning of the testator, not the meaning of the adjudications."), *modified*, 179 A.D. 176, 156 N.Y.S. 32 (1915); *see also Reed v. Proprietors of Locks & Canals on Merrimac River*, 49 U.S. (8 How.) 274, 288, 12 L.Ed. 1077 (1850) ("Whereas the intention of the parties is to be found in their deed alone, which it is the duty of the court to construe.").

C. The more appropriate analogy for interpreting patent claims is the statutory interpretation analogy. Statutory interpretation is a matter of law strictly for the court. There can be only one correct interpretation of a statute that applies to all persons. Statutes are written instruments that all persons are presumed to be aware of and are bound to follow. Statutes, like patents, are enforceable against the public, unlike private agreements between contracting parties. When interpreting statutes, a court looks to the language of the statute and construes it according to the traditional tools of statutory construction, including certain well known canons of construction. *United States v. John C. Grimberg Co.*, 702 F.2d 1362, 1365, 1368 (Fed.Cir.1983). A court may also find it necessary to review the legislative history of the statute, which is itself a matter of public record, just as the specification and prosecution history of a patent are public records. *Id.* at 1369. While a court may seek from the public record to ascertain the collective intent of Congress when it interprets a statute, the subjective intent of any particular person involved in the legislative process is not determinative. Thus the members of Congress, or staffpersons who draft legislation, are not deposed or called on to testify in actions involving statutory interpretation. Similarly, the subjective meaning that a patentee may ascribe to claim language is also not determinative. Thus, it is from the public record that a court should seek in a patent infringement case to find the meaning of claim language.

[27] There are, of course, differences between

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a statute and a patent. But because both of these public instruments may create liability in third persons who were not participants in the legislative process or the PTO proceedings, as the case may be, we conclude that the statutory interpretation model is a more accurate model than the contractual one for purposes of determining whether constitutional protections are transgressed by assigning claim construction exclusively to judges.

D. The dissenting opinion and one of the concurring opinions, along with Markman and certain of the amici, contend that assigning claim construction exclusively to judges is in conflict with certain decisions of the Supreme Court. We are not persuaded. The dissenting and concurring opinions place heavy reliance on two Supreme Court cases, *Silsby v. Foote*, 55 U.S. (14 How.) 218, 14 L.Ed. 391 (1852), and *Bischoff v. Wethered*, 76 U.S. (9 Wall.) 812, 19 L.Ed. 829 (1869), for the proposition that questions of fact may arise in the determination of the scope of a patent claim. A close examination of these cases, however, reveals they do not support that argument. [FN16]

FN16. One concurring opinion also relies on *Winans v. Denmead*, 56 U.S. (15 How.) 330, 14 L.Ed. 717 (1853), as a case where the court "construed" the claim in a general manner and left it for the jury to fill in specifics. As correctly noted by the dissent, this case is more properly understood as one involving the doctrine of equivalents infringement notwithstanding the literal language of the claims.

In *Silsby v. Foote*, the Court affirmed a trial judge who left the question of what elements were "essential" for the claimed invention to the jury. According to the Court, the claim in that case stated: "I also claim the combination, above described, by which the regulation of the heat of the stove, or other structure in which it may be used, is effected." *Id.*, 55 U.S. at 226. The Court agreed with the petitioner that "[t]he construction of the claim was undoubtedly for the court." *Id.* at 225. The Court continued, however, that "[w]hen a claim does not point out and designate the particular elements *988 which

compose a combination, but only declares, as it properly may, that the combination is made up of so much of the described machinery as effects a particular result, it is a question of fact which of the described parts are essential to produce that result." *Id.* at 226. Thus the Court concluded that where a combination claim does not point out the elements of the claim but rather describes "machinery as effects a particular result," the jury may determine "which of the described parts are essential to produce that result." Otherwise, the question of claim scope belonged to the court.

It is difficult to see how *Silsby* supports the views set forth in the dissenting and concurring opinions. This is especially so because applicants are now required by 35 U.S.C. § 112 to particularly point out and distinctly claim the subject matter the applicant regards as his invention and this requirement applies with equal force to claims having means-plus-function limitations. The only jury-triable issue described in *Silsby* on the question of claim scope is now statutorily foreclosed. Further, a jury is not allowed to canvass the patent specification to evaluate what portions of a combination claim are "essential" to produce a particular result. See *Keystone*, 95 U.S. at 278 ("This provision [the predecessor to section 112, para. 2] was inserted in the law for the purpose of relieving the courts from the duty of ascertaining the exact invention of the patentee by inference and conjecture, derived from a laborious examination of the previous inventions, and a comparison thereof with that claimed by him."). Both this court and the Supreme Court have made clear that all elements of a patent claim are material, with no single part of a claim being more important or "essential" than another. See *Fay v. Cordesman*, 109 U.S. 408, 420-21, 3 S.Ct. 236, 243-45, 27 L.Ed. 979 (1883); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 936, 4 USPQ2d 1737, 1741 (Fed.Cir.1987) (in banc).

The reliance on *Bischoff v. Wethered* is even more puzzling. *Bischoff* did not even involve an infringement issue but rather involved a question of invalidity in a breach of contract

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action. The plaintiff, who sought to invalidate the patent on the basis of a prior art patent, argued that the court, and not the jury, should have decided the question of "identity or diversity of the inventions." *Bischoff*, 76 U.S. at 816. The Court disagreed. While the Court again acknowledged that "construction of written instruments is the province of the court alone," it concluded that in this case "[i]t is not the construction of the instrument, but the character of the thing invented, which is sought in questions of identity and diversity of inventions." *Id.* at 816.

Markman's case does not involve a question of identity or diversity of inventions. The word "claim" does not even appear in the *Bischoff* case. Rather *Bischoff* is concerned with divining the "character of the thing invented" from the patent in suit and the prior art patent. It is difficult, if not impossible, to discern any legal principle from *Bischoff* that relates to claim construction in the context of patent infringement. To the extent the dissenting and concurring opinions view claim construction in an infringement case as a search for the "character" of the thing invented, we disagree.

Finally, the concurring opinions consider that much of our opinion is dictum because there is no "genuine" dispute as to the claim term "inventory." As we have demonstrated, Markman squarely raised the issue of whether the court acted within its power in granting JMOL after the jury had construed the claims. The trial court viewed claim construction as a legal question and determined that it could decide the meaning of the term "inventory" as a matter of law based on the patent document and prosecution history. Markman, on the other hand, viewed the construction of the claim as one of fact with the jury verdict being supported by the evidence.

CONCLUSION

Correctly reasoning that claim construction is a matter of law for the court, the district court properly rejected the jury's verdict and granted JMOL. Upon our *de novo* review of the court's construction of the claim language,

we agree that "inventory" in claim 1 includes within its meaning "articles of clothing." It is undisputed that Westview's *989 device does not and cannot track articles of clothing. Accordingly, there is no substantial evidence to support the jury's finding of infringement of claims 1 and 10 of United States Reissue Patent No. 33,054 when those claims are correctly construed. The district court's grant of judgment of noninfringement as a matter of law is

AFFIRMED.

MAYER, Circuit Judge, concurring in the judgment.

Today the court jettisons more than two hundred years of jurisprudence and eviscerates the role of the jury preserved by the Seventh Amendment of the Constitution of the United States; it marks a sea change in the course of patent law that is nothing short of bizarre. Sadly, this decision represents a secession from the mainstream of the law. It portends turbulence and cynicism in patent litigation. For this is not just about claim language, it is about ejecting juries from infringement cases. All these pages and all these words cannot camouflage what the court well knows: to decide what the claims mean is nearly always to decide the case.

But today's action is of a piece with a broader bid afoot to essentially banish juries from patent cases altogether. If it succeeds juries will be relegated, in those few cases where they have any presence at all, to rubber stamps, their verdicts preordained by "legal" and "equitable" determinations that brook only one "reasonable" result. Indeed, this movement would vest authority over patent disputes in legislative courts, unconstrained by Article III and the Seventh Amendment. See *In re Lockwood*, 50 F.3d 966, 970 (Fed.Cir.1995) (opinion dissenting from order denying rehearing in banc) ("A constitutional jury right to determine validity of a patent does not attach to this public grant. Congress could place the issue of validity entirely in the hands of an Article I trial court with particular expertise if it chose to do so.").

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Declaiming that the jury is a "black box" incapable of a "reasoned decision", several judges of the court have already advised that they are aboard this campaign. *Id.*, at 990. The quest to free patent litigation from the "unpredictability" of jury verdicts, and generalist judges, results from insular dogmatism inspired by unwarrantable elitism; it is unconstitutional.

The question is whether the interpretation of patent claims is a purely legal exercise--always decided by the judge as a matter of law and never raising a question of fact--or rather a mixed question of law and fact, in which some factual matters might need to be resolved by the factfinder on the way to construing the claims as a matter of law. The answer is critical to how questions of claim interpretation are decided at the trial level and how we review them on appeal.

The ultimate issue of patent scope, depending as it does on the legal effect of the words of the claims, is a question of law. But it does not necessarily follow that the judge is to decide every question that arises during the course of claim construction as a matter of law. Cf. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 86 S.Ct. 684, 693, 15 L.Ed.2d 545 (1966) (obviousness is a legal conclusion with underlying factual determinations). [FN1] Instead, characterization of claim construction as "legal" begs the questions whether fact issues may arise subsidiary to the ultimate legal conclusion, how such issues are to be decided, and by whom.

FN1. While the ultimate question of patent validity is one of law, *Graham v. John Deere Co.*, 383 U.S. 1, 17, 86 S.Ct. 684, 693, 15 L.Ed.2d 545 (1966), there are a number of underlying inquiries that raise questions of fact. In addition to obviousness, these include anticipation, *Atlas Powder Co. v. E.I. DuPont de Nemours & Co.*, 750 F.2d 1569, 1573, 224 USPQ 409, 411 (Fed.Cir.1985), prior public use or sale, *U.S. Envtl. Prods., Inc. v. Westall*, 911 F.2d 713, 715, 15 USPQ2d 1898, 1900 (Fed.Cir.1990) (a legal conclusion supported by underlying facts), and sufficiency of a specification's disclosure, *Utter v. Hiraga*, 845 F.2d 993, 998, 6 USPQ2d 1709, 1714 (Fed.Cir.1988) (same).

Contrary to what it says today, this court (including the judges in the majority) has always held that claim interpretation is a matter of law depending on underlying factual inquiries. See, e.g., *Arachnid Inc. v. Medalist Mktg. Corp.*, 972 F.2d 1300, 1302, 23 *990 USPQ2d 1946, 1948 (Fed.Cir.1992) (though claim construction is issue of law for the court, it "may require the factfinder to resolve certain factual issues such as what occurred during the prosecution history"); *Lemelson v. General Mills Inc.*, 968 F.2d 1202, 1206, 23 USPQ2d 1284, 1288 (Fed.Cir.1992) (same, noting that "underlying factual issues in dispute become the jury's province to resolve in the course of rendering its verdict on infringement"); *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1579, 12 USPQ2d 1382, 1386 (Fed.Cir.1989) ("A disputed issue of fact may, of course, arise in connection with interpretation of a term in a claim if there is a genuine evidentiary conflict created by the underlying probative evidence pertinent to the claim's interpretation. However, without such evidentiary conflict, claim interpretation may be resolved as an issue of law by the court...." (citation omitted)); see also *Tol-O-Matic Inc. v. Proma Produkt-Und Mktg.*, 945 F.2d 1546, 1552, 20 USPQ2d 1332, 1338 (Fed.Cir.1991) (substantial evidence supported jury's presumed fact findings on disputed terms and prosecution history); *Smithkline Diagnostics Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 885, 8 USPQ2d 1468, 1474 (Fed.Cir.1988) (fact findings on disputed prosecution history clearly erroneous); *Perini America v. PCM Co.*, 832 F.2d 581, 586, 4 USPQ2d 1621, 1625 (Fed.Cir.1987) (in bench trial, court's interpretation of disputed claim terms not clearly erroneous); *Tillotson Ltd. v. Walbro Corp.*, 831 F.2d 1033, 1039, 4 USPQ2d 1450, 1454 (Fed.Cir.1987) (vacating summary judgment where construction turns on factual disputes arising from specification, prosecution history, and industry practice); *Tandon Corp. v. ITC*, 831 F.2d 1017, 1021, 4 USPQ2d 1283, 1286 (Fed.Cir.1987) (Commission's findings on prosecution history and meaning of terms supported by substantial evidence); *H.H. Robertson Co. v. United Steel Deck Inc.*, 820 F.2d 384, 389, 2 USPQ2d 1926, 1929 (Fed.Cir.1987) (in bench

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trial, court's fact findings on claim terms not clearly erroneous); *Howes v. Medical Components Inc.*, 814 F.2d 638, 646, 2 USPQ2d 1271, 1275 (Fed.Cir.1987) (vacating summary judgment because of fact issues surrounding prosecution history); *Moeller v. Ionetics, Inc.*, 794 F.2d 653, 657, 229 USPQ 992, 995 (Fed.Cir.1986) (vacating summary judgment where terms create underlying fact dispute); *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 976, 226 USPQ 5, 9 (Fed.Cir.1985) (vacating summary judgment where fact question of equivalents of "means plus function" claim disputed); *Bio-Rad Lab., Inc. v. Nicolet Instrument Corp.*, 739 F.2d 604, 614, 222 USPQ 654, 662 (Fed.Cir.1984) (substantial evidence supported jury interpretation of disputed terms); *McGill Inc. v. John Zink Co.*, 736 F.2d 666, 675, 221 USPQ 944, 951 (Fed.Cir.1984) (reversing jury verdict where construction premised on facts not supported by substantial evidence). So it is remarkable that the court so casually changes its collective mind, especially when the just cited precedent was compelled by the Seventh Amendment and not the mere preference of a sufficient number of judges. [FN2] The court's revisionist reading of precedent to loose claim interpretation from its factual foundations will have profoundly negative consequences for the well-established roles of trial judges, juries, and our court in patent cases.

FN2. The court pretends there is a line of contrary authority. *Ante* at 986-87. But most of its cases arrived at this court after bench trials--a puzzling source for guidance on the commands of the Seventh Amendment; others actually implicating the right to a jury trial sprang from facts simply inadequate to support a reasonable jury verdict. Indeed, the one case that pays lip service to this novel rule, *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 822-23, 23 USPQ2d 1426, 1432-33 (Fed.Cir.1992), like this case, did not require excursion beyond the patent documents themselves. There may be a reason why the court is hellbent for its result, but it does not emanate from the cases.

I.

Anyone who wants to know what a patent protects must first read its claims, for they are the measure of its scope. *Aro Mfg. Co. v.*

Convertible Top Replacement Co., 365 U.S. 336, 339, 81 S.Ct. 599, 601, 5 L.Ed.2d 592 (1961). Claim language does not exist in a vacuum; it must be understood by reference to the documents annexed to the patent grant, including the specification, of which the claims are a part, and any drawings. *Autogiro Co. of Am. v. United States*, 384 *991 F.2d 391, 397, 181 Ct.Cl. 55, 155 USPQ 697, 702 (1967). The prosecution history often proves useful in determining a patent's scope, for it reveals the course of dealing with the Patent Office, which may show a particular meaning attached to the terms, or a position taken by the applicant to ensure that the patent would issue. *Graham v. John Deere Co.*, 383 U.S. at 33, 86 S.Ct. at 701. These documents are always available during the course of claim interpretation; they are not extrinsic evidence, though some opinions so characterize them, because they are essentially incorporated into the patent itself.

Patents are directed to those skilled in the art. The task of determining just what the claims mean to skilled artisans falls, in the first instance, to the court. But if, after consideration of all of this documentation, the judge cannot readily resolve the meaning of the claims, he resorts to extrinsic evidence to shed light on them. *Moeller*, 794 F.2d at 657, 229 USPQ at 995 (trial judge's failure to allow expert testimony was abuse of discretion). This evidence, in the form of prior art documentary evidence or expert testimony, can show what the claims would mean to those skilled in the art. The content of the prior art and the testimony of technical experts can reveal how others use and understand technical terms that may appear ambiguous or opaque to the judge, who rarely has the knowledge of those skilled in the field of the patent. The inventor himself may qualify as an expert and testify what his claims would mean in the relevant art. [FN3] The judge can even advert to the testimony of patent law experts--that is, patent lawyers--for advice on the interpretation of claims. [FN4] If this information clarifies the meaning of the claims and is uncontested, the judge may rule as a matter of law.

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FN3. Of course, the inventor's testimony as to what he intended or how he understands the patent, as opposed to his testimony as an expert, may be relevant, but is entitled to little weight in the face of evidence to the contrary. See *North American Vaccine v. American Cyanamid Co.*, 7 F.3d 1571, 1577, 28 USPQ2d 1333, 1337 (Fed.Cir.1993) (inventor's "after-the-fact testimony is of little weight compared to the clear import of the patent disclosure itself"); *Intellical, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387, 21 USPQ2d 1383, 1386 (Fed.Cir.1992) ("where a disputed term would be understood to have its ordinary meaning by one of skill in the art from the patent and its history, extrinsic evidence that the inventor may have subjectively intended a different meaning does not preclude summary judgment.").

FN4. A fact dispute cannot arise solely from testimony of a patent law expert. While this sort of testimony is acceptable, even if often overdone, as an interpretive aid to the court, it is not evidence and cannot create a genuine fact question for the jury. See *Nutrition 21 v. United States*, 930 F.2d 862, 871 n. 2, 18 USPQ2d 1347, 1350 n. 2 (Fed.Cir.1991) (patent law expert's "opinion on the ultimate legal conclusion is neither required nor indeed 'evidence' at all"); see also *Avia Group Int'l, Inc. v. L.A. Gear Cal., Inc.*, 853 F.2d 1557, 1564, 7 USPQ2d 1548, 1554 (Fed.Cir.1988) (conflicting opinions of legal experts create no material issue of fact).

But sometimes extrinsic evidence results in a genuine dispute over the meaning of a term or an event during prosecution. [FN5] When that happens, it falls to the finder of fact to settle it. *Lemelson*, 968 F.2d at 1206, 23 USPQ2d at 1288; *Tol-O-Matic Inc. v. Proma Produkt-Und Mktg.*, 945 F.2d at 1550, 20 USPQ2d at 1336; *Smithkline Diagnostics Inc. v. Helena Lab. Corp.*, 859 F.2d at 882, 8 USPQ2d at 1472; *Palumbo v. Don-Joy Co.*, 762 F.2d at 974, 226 USPQ at 8.

FN5. Of course, not every disagreement gives rise to a genuine fact question. *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580, 12 USPQ2d 1382, 1386 (Fed.Cir.1989); see also *Senmed Inc. v. Richard-Allen Medical Indus.*, 888 F.2d 815, 819 n. 8, 12 USPQ2d 1508, 1512 n. 8 (1989) (inventor's testimony as to meaning of "on" contrary to ordinary meaning raised no real "dispute").

When a question of claim construction arrives here on appeal, this court reviews the ultimate construction given the claims under the *de novo* standard applicable to all legal conclusions. But any facts found in the course of interpreting the claims must be subject to the same standard by which we review any other factual determinations: for clear error in facts found by a court; for substantial evidence to support a jury's verdict. Fed.R.Civ.P. 52(a); *Perini America v. PCM Co.*, 832 F.2d at 584, 4 USPQ2d at 1624; *McGill Inc. v. John Zink Co.*, 736 F.2d at 672, 221 USPQ at 948.

This standard recognizes the jury's important role in making factual determinations, *992 and the role of the trial court as the primary decisionmaker in bench trials. A trial is "the 'main event' ... rather than a 'tryout on the road.'" *Anderson v. City of Bessemer City*, 470 U.S. 564, 575, 105 S.Ct. 1504, 1512, 84 L.Ed.2d 518 (1985). By broadly proclaiming all aspects of claim interpretation to be legal, the court today usurps a major part of the functions of both trial judge and jury in patent cases, obliterating the traditional, defined differences between the roles of judge and jury, and trial and appellate courts.

II.

Beyond any policy argument supporting the traditional roles of judge and jury in patent cases, the court's decision today flies in the face of the constitutional right to a jury promised by the Seventh Amendment of the Constitution. That promise, "[i]n suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved," protects litigants' right to a jury trial where legal, as opposed to equitable, causes are to be determined. *Chauffers, Teamsters & Helpers Local No. 391 v. Terry*, 494 U.S. 558, 564, 110 S.Ct. 1339, 1344, 108 L.Ed.2d 519 (1990). The amendment does not create an independent right to trial by jury but gives parties rights equivalent in scope to those that existed at common law, in England in 1791, when the Bill of Rights was ratified. *Tull v. United States*, 481 U.S. 412, 417, 107 S.Ct. 1831, 1835, 95 L.Ed.2d 365

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(1987). It does not stop there, however; it extends as well to statutory actions subsequently created by Congress if they are analogous to actions decided in the law courts of eighteenth century England. *Id.*

The Seventh Amendment does not guarantee the right to have a jury decide all issues in a case. It properly resolves only factual questions, while legal matters are for the court. Even within the realm of factual questions, whether a particular question must always go to the jury depends "on whether the jury must shoulder this responsibility as necessary to preserve the 'substance of the common-law right of trial by jury.'" *Id.* at 426, 107 S.Ct. at 1840 (quoting *Colgrove v. Battin*, 413 U.S. 149, 152, 93 S.Ct. 2448, 2450, 37 L.Ed.2d 522 (1973)). The Seventh Amendment was intended not to formalize any particular rigid procedural rules, but "to preserve the basic institution of trial by jury in only its most fundamental elements...." *Parklane Hosiery Co. v. Shore*, 439 U.S. 322, 337, 99 S.Ct. 645, 658, 58 L.Ed.2d 552 (1979) (quoting *Galloway v. United States*, 319 U.S. 372, 392, 63 S.Ct. 1077, 1088, 87 L.Ed. 1458 (1943)); see also *Baltimore & Carolina Line, Inc. v. Redman*, 295 U.S. 654, 657, 55 S.Ct. 890, 891, 79 L.Ed. 1636 (1935) ("particularly to retain the common-law distinction between the province of the court and that of the jury"). But where a particular issue goes to these "fundamental elements" or the "substance of the common-law right of trial by jury," no court may constitutionally remove it from the jury. See *Walker v. New Mexico & So. Pac. R. Co.*, 165 U.S. 593, 596, 17 S.Ct. 421, 422, 41 L.Ed. 837 (1897) (Seventh Amendment "requires that questions of fact in common law actions shall be settled by a jury, and that the court shall not assume directly or indirectly to take from the jury or to itself such prerogative."); see also *Granfinanciera S.A. v. Nordberg*, 492 U.S. 33, 51, 109 S.Ct. 2782, 2795, 106 L.Ed.2d 26 (1989) (even Congress "lacks the power to strip parties contesting matters of private right of their constitutional right to a trial by jury."). The court's action in this case does just that.

An action for patent infringement is one that

would have been heard in the law courts of old England. See, e.g., *Bramah v. Hardcastle*, 1 Carp.P.C. 168 (K.B.1789), reprinted in *I Decisions on the Law of Patents for Inventions* 51, 53 (Benjamin V. Abbott ed.) (1887) [hereinafter Abbott] (jury trial of infringement action; jury instructed that patent was invalid, but jury verdict for plaintiff not disturbed); *Morris v. Bramson*, 1 Carp.P.C. 30 (K.B.1776), reprinted in Abbott, *supra*, at 21 (jury trial of infringement action); see also *Boulton v. Bull*, 1 Carp P.C. 117 (C.P.1795), reprinted in Abbott, *supra*, at 59, 74 ("[I]nfringement or not, is a question for the jury; in order to decide this case, they must understand the nature of the improvement or thing infringed...."). In this country, a jury trial has always been available in patent cases where damages are sought. Indeed, *993 the first Patent Act, in 1790, expressly provided that a patent owner was entitled to "such damages as shall be assessed by a jury." Act of April 10, 1790, ch. 7, § 4, 1 Stat. 109. In such cases, the jury has been entrusted with ruling on the ultimate question of infringement, as well as any factual disputes that arise subsidiary to the determination of the legal question of patent validity.

Not infrequently, the ultimate question of infringement, indisputably a matter for the jury, is effectively dictated by the construction given the patent claims. This happens, of course, when the judge affirmatively takes the question from the jury by granting summary judgment or judgment as a matter of law, as it did here; it can also occur when, even though the judge sends the question to the jury, his interpretation of the claims forces the jury's decision on infringement. That is to say, choosing between contending interpretations of a claim can decide the matter of infringement for all intents and purposes. Our constitutional mandate to preserve the right to jury trial therefore demands that we view any intrusion on the jury's role in deciding infringement with deep suspicion. See *Dimick v. Schiedt*, 293 U.S. 474, 486, 55 S.Ct. 296, 301, 79 L.Ed. 603 (1935) ("Maintenance of the jury as a fact-finding body is of such importance and occupies so firm a place in our history and jurisprudence

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that any seeming curtailment of the right to a jury trial should be scrutinized with utmost care.").

Today's decision also threatens to do indirectly what we have declined to do directly, that is, create a "complexity exception" to the Seventh Amendment for patent cases. See *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1130, 227 USPQ 577, 592 (Fed.Cir.1985) (Markey, C.J., additional views). But there is simply no reason to believe that judges are any more qualified than juries to resolve the complex technical issues often present in patent cases. *Id.* at 1128 & n. 7, 227 USPQ at 591 & n. 7. Indeed, the effect of this case is to make of the judicial process a charade, for notwithstanding any trial level activity, this court will do pretty much what it wants under its de novo retrial. We have consistently stressed that the same rules apply to patent cases as apply to all other civil disputes. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1547, 220 USPQ 193, 197 (1983) ("So long as the Seventh Amendment stands, the right to a jury trial should not be rationed, nor should particular issues in particular types of cases be treated differently from similar issues in other types of cases."). The court subverts this principle and the demands of the Seventh Amendment by the ruse of reclassifying factual questions as legal ones.

III.

Those who argue for interpretation of claims solely as a matter of law by the judge spew a panoply of cases ostensibly in support. Close examination of these cases, however, reveals that, like the one before us today, interpretation of the claims at issue before the deciding court presented no real factual question. Thus, for example, in *Hogg v. Emerson*, 47 U.S. (6 How.) 437, 484, 12 L.Ed. 505 (1848), the Court stated that "without the aid of experts and machinists, [we have] no difficulty in ascertaining, from the language used here," the meaning of the patent. Similarly, *Winans v. New York & Erie R.R. Co.*, 62 U.S. (21 How.) 88, 100, 16 L.Ed. 68 (1858), allowed the possibility that "experts may be

examined to explain terms of art, and the state of the art at any given time. They may explain to the court and jury the machines, models, or drawings exhibited." But the Court went on to say that there was only one construction of the patent "which the language of this specification will admit" and "it would be wholly superfluous to examine experts to teach the court, what they could clearly perceive without such information." *Id.*, 62 U.S. at 101. *Brown v. Piper*, 91 U.S. 37, 41, 23 L.Ed. 200 (1847), recognized that evidence on "what was old and in general use at the time of the alleged invention" was admitted at the trial but that it was unnecessary. "[W]e think the patent was void on its face, and that the court might have stopped short at that instrument, and without looking beyond it into the answers and testimony, *sua sponte*, if objection were not taken by counsel, well have adjudged in favor of the defendant." *Id.*, 91 U.S. at 44. *994 See also *U.S. Indus. Chem., Inc. v. Carbide & Carbon Chem. Corp.*, 315 U.S. 668, 677, 62 S.Ct. 839, 844, 86 L.Ed. 1105 (1942) ("[O]n the face of the papers, the process described in the original patent included a step [omitted from the reissue]," and the trial court erroneously relied on unnecessary expert opinion in its improper conclusion that the reissue was not invalid.); *Exhibit Supply Co. v. Ace Corp.*, 315 U.S. 126, 134, 62 S.Ct. 513, 518, 86 L.Ed. 736 (1942) ("examination of the drawings and specifications indicates clearly enough" the meaning of the claim); *Smith v. Snow*, 294 U.S. 1, 14, 55 S.Ct. 279, 284, 79 L.Ed. 721 (1935) ("Examination of the claim, in light of both [undisputed] scientific fact and of the particular form in which the petitioner reduced the claim to practice as described in the specifications, makes it plain" what are the claim's relevant limitations.).

These cases simply do not address the effect of extrinsic evidence giving rise to a legitimate fact question. They are cases where the documentary record alone was wholly adequate to derive the patent's proper construction. [FN6] It is hardly surprising that courts would treat claim interpretation under these circumstances as a matter of law, for it could not be otherwise. See Fed.R.Civ.P. 50(a)

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(court may grant judgment as a matter of law where underlying facts could not support reasonable jury verdict to the contrary), and 56(c) (summary judgment appropriate where there is no genuine issue as to any material fact); *Newell Companies, Inc. v. Kenney Mfg. Co.*, 864 F.2d 757, 762, 763, 9 USPQ2d 1417, 1421-22 (1988) (approving use of judgment as a matter of law and summary judgment on obviousness where underlying facts are not disputed).

FN6. In one case where it appeared the Court "avail[ed] itself of the light furnished by the evidence to enable it to understand the terms used in the patent and the devices and operations described or alluded to therein," *Webster Loom Co. v. Higgins*, 105 U.S. 580, 586, 26 L.Ed. 1177 (1881), the evidence was examined in ruling on the issue of enablement, i.e., whether those of skill in the art would understand the terms of the patent. Even given the conflicting testimony, the Court concluded that the terms of the patent were "sufficiently clear and full in the description of the invention." *Id.* 105 U.S. at 589. When it reached the question of infringement, however, it did not mention any evidence other than the specification and claims and stated "if we examine the language of the claim [in light of the specification], it seems to us that all doubt as to its meaning is removed." *Id.* at 598. There was no reliance on any extrinsic evidence in construing the claims for purposes of infringement.

Indeed, some cases cited in support of a purported rule that claim construction is always entirely a matter of law expressly limit the rule to those cases where the patent may be understood on the basis of the documents alone, without resort to extrinsic evidence; these cases acknowledge that fact questions could be raised that would require submission to a jury. In *Heald v. Rice*, 104 U.S. 737, 749, 26 L.Ed. 910 (1881), the Supreme Court explained:

That is, if it appears from the face of the instruments that extrinsic evidence is not needed to explain terms of art, or to apply the descriptions to the subject-matter, so that the court is able from mere comparison to say what is the invention described in each, and to affirm from mere comparison that the inventions are not the same, but different,

then the question of identity is one of pure construction, and not of evidence, and consequently is a matter of law for the court, without any auxiliary matter of fact to be passed upon by a jury, if the action be at law.

The Court there determined that it had a case in which the question could be determined "from the mere reading of the two specifications" and that it was "too plain for argument that they are perfectly distinct." *Id.*, 104 U.S. at 753; see also *Singer Mfg. Co. v. Cramer*, 192 U.S. 265, 275, 24 S.Ct. 291, 295, 48 L.Ed. 437 (1904) ("As in each of the patents in question it is apparent from the face of the instrument that extrinsic evidence is not needed ... the question of infringement or no infringement is one of law...."); *Market St. Cable Ry. Co. v. Rowley*, 155 U.S. 621, 625, 15 S.Ct. 224, 226, 39 L.Ed. 284 (1894) (same as *Heald v. Rice*). These cases recognize that where extrinsic evidence is required and raises a real factual dispute, the question is no longer one of "pure construction," so that the jury must play its role in the construction of the claims.

***995** But where the question has arisen--where the proper construction of claims depends on the resolution of a factual dispute--the Supreme Court has stated in no uncertain terms that the jury has the duty to decide. These are cases where the meaning of a patent may not be derived from its terms alone, forcing the judge to go beyond the documentary evidence for aid. This gives rise to issues of historical fact the resolution of which must be left to a jury.

The claim before the court in *Silsby v. Foote*, 55 U.S. (14 How.) 218, 14 L.Ed. 391 (1852), was directed to "the combination, above described, by which the regulation of the heat of the stove, or other structure in which it may be used, is effected." *Id.*, 55 U.S. at 226. The specification disclosed a stove containing a number of discrete parts. To be sure, the judge "construed the claim"; he instructed the jury that it covered "a combination of such of the described parts as were combined and arranged for the purpose of producing a particular effect, viz., to regulate the heat of a stove." *Id.* at 225. But the defendants asked

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the judge to rule as a matter of law that the parts referred to in the claim were "the index, the detaching process, and the pendulum." *Id.* at 226. The trial court refused, holding that this question was for the jury.

The Supreme Court affirmed asking, "How could the Judge know this as a matter of law?" *Id.* Once the trial court had construed the claim and instructed the jury, "it therefore became a question for the jury, upon the evidence of experts, or an inspection by them of the machines, or upon both, what parts described did in point of fact enter into, and constitute an essential part of this combination." *Id.* Only then could the jury determine if the accused device contained all of these elements and was therefore an infringement. The Court said the "defendants' counsel exhibited to the court the models of the machines of the defendants and the plaintiff, for the purpose of satisfying the court the jury must have understood *they were at liberty to construe the claim, and that they did in truth so construe it*, as to exclude from the combination claimed by the plaintiff, what is called the detaching process." *Id.* (emphasis added).

Again in *Winans v. Denmead*, 56 U.S. (15 How.) 330, 14 L.Ed. 717 (1853), the court "construed" the claim in a general manner and left it for the jury to fill in the specifics. The claim at issue was directed to a rail car for the transportation of coal "in the form of a frustum of a cone, substantially as herein described, whereby the force exerted by the weight of the load presses equally in all directions." *Id.*, 56 U.S. at 342. The defendant requested the jury be instructed that the claim was limited to a circular form only, as was described in the specification and did not cover the defendant's rectilinear design. The Supreme Court affirmed the trial court's refusal of the instructions, stating that "where the whole substance of the invention may be copied in a different form, it is the duty of the courts and juries to look through the form for the substance of the invention-for that which entitled the inventor to his patent, and which the patent was designed to secure." *Id.* at 343.

The Court considered how far an alleged infringing car could depart from the form of a perfect circle and still infringe, and determined that the claim encompassed anything "so near to a true circle as substantially to embody the patentee's mode of operation, and thereby attain the same result as was reached by his invention." *Id.* at 344. It cited evidence, including expert testimony as to the mode of operation of the patentee's car and whether the accused car attained the same results as the claimed car. The Court unmistakably left it to the jury to determine the meaning of the claim, its scope, and refused to proclaim it a matter of law outside the province of the jury. *Id.*

These cases are especially relevant because they show that the jury has always had a role in determining a patent's scope. This historic reliance on juries to aid the court in deciding exactly what patents protect matters here because the Seventh Amendment demands that courts preserve the right to jury trial as it existed at common law. Old cases are obviously instructive under this peculiar standard. Accordingly, efforts to distinguish *Silsby* and *Winans* because of *996 their age are disingenuous. This court has no office to invoke desuetude to evade the Seventh Amendment and the Supreme Court.

Our patent laws have always required inventors to point out their inventions in detail sufficient to both distinguish the prior art and tell the public what protection the patent confers. The very first patent act required that letters patent "describ[e] the said invention or discovery, clearly, truly, and fully." Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 109. The applicant for a patent was at the time required to submit "a specification in writing, containing a description ... of the thing or things by him or them invented or discovered, ... which specification shall be so particular ... as ... to distinguish the invention or discovery from other things before known and used." *Id.* § 2. The word "claim" first appeared in the Act of 1836, ch. 357, § 6, 5 Stat. 117 (July 4, 1836), requiring that the applicant "shall particularly specify and point out the part, improvement, or combination,

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which he claims as his own invention." Claims, per se, were not expressly required until the Act of 1870, ch. 230, § 26, 16 Stat. 198 (July 8, 1870), which said the applicant "shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery", but they were in common use much earlier in rudimentary form. See, e.g., *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 428, 5 L.Ed. 472 (1822) (Specification concluded: "I claim as my invention, the peculiar properties or principles which this machine possesses, in spreading, turning and gathering the meal, at one operation, and the rising and lowering its arms, by its motion, to accommodate itself to any quantity of meal it has to operate on.").

In light of this history, it is apparent that the 1870 Act simply codified the preference for particular claiming already expressed by the Supreme Court. See *Brooks v. Fiske*, 56 U.S. (15 How.) 212, 215, 14 L.Ed. 665 (1853) (specification and drawings to be considered "only for the purpose of enabling us to correctly interpret the claim"). This change from a regime of "central" claiming to one of "peripheral" claiming may seem a major step in the patent discipline, but the distinction it represents is irrelevant to the Seventh Amendment. When the trial court in *Silsby* construed the claim there at issue, it was performing essentially the same task of claim construction as courts perform today. When the judge then left it for the jury to clarify the ambiguity as to just what elements the claims encompassed, he recognized the existence of a jury question precisely the same as that which the court rejects today.

Even if it were correct that the 1870 Act created a new and different claiming requirement out of whole cloth, I see no evidence that Congress thereby intended to strip the jury of its traditional role in determining patent scope. Indeed, the Seventh Amendment's command that we preserve jury trial rights as they existed at common law dictates that Congress could not have taken the question from the jury even if it wanted to. See *Granfinanciera*, 492 U.S. at 51, 109 S.Ct. at 2795 (Congress "lacks the

power to strip parties contesting matters of private right of their constitutional right to a trial by jury"; private rights involve "the liability of one individual to another under the law as defined" (quoting *Crowell v. Benson*, 285 U.S. 22, 50, 52 S.Ct. 285, 292, 76 L.Ed. 598 (1932))).

Cases involving patent interpretation in the validity context reach the same result. [FN7] For example, in *Bischoff v. Wethered*, 76 U.S. (9 Wall.) 812, 19 L.Ed. 829 (1869), the Court explained that although it was normally the "province of the court, and not the jury, to construe the meaning of documentary evidence," the "specifications of patents for inventions are documents of a peculiar kind." *Id.*, 76 U.S. at 815. The Court stated further that inventions, the subjects of patents, "have their existence *in pais*, outside of the documents themselves; and which are commonly described by terms of art or mystery to which they respectively belong; and these *997 descriptions and terms of art often require peculiar knowledge and education to understand them aright." *Id.* Accordingly, an understanding of the patented invention "is to be properly sought, like the explanation of all latent ambiguities arising from the description of external things, by evidence *in pais*," outside of the patent document. *Id.* This inquiry "belong[s] to the province of evidence, and not that of construction," and thus falls to the jury. *Id.* at 816.

FN7. Cases about patent validity are authoritative on the issue of claim construction. A claim must be interpreted the same for both validity and infringement. E.g., *Smithkline Diagnostics Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 882, 8 USPQ2d 1468, 1471 (Fed.Cir.1988). A claim must be construed before determining its validity just as it is first construed before deciding infringement.

This illustrates how claim construction may sometimes require the resolution of factual matters before a claim can be authoritatively construed. The exercise is further informed by decisions interpreting analogous instruments, for patents are legal documents like contracts or deeds. See *Goodyear Dental*